

AD-A012 868

**SURVEY-GUIDED DEVELOPMENT: DATA BASED ORGANIZATIONAL  
CHANGE**

**David G. Bowers, et al**

**Michigan University**

**Prepared for:**

**Office of Naval Research**

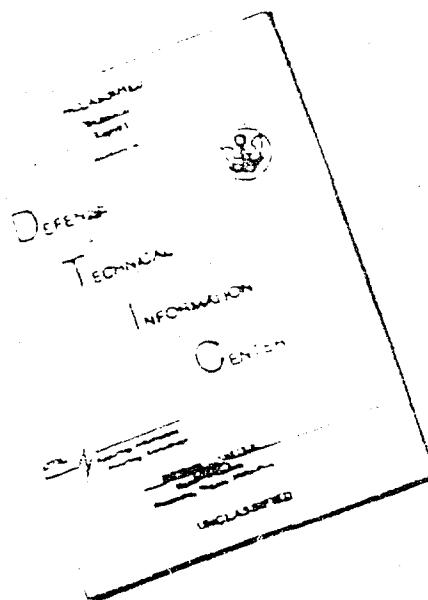
**June 1975**

**DISTRIBUTED BY:**

**NTIS**

**National Technical Information Service  
U. S. DEPARTMENT OF COMMERCE**

# DISCLAIMER NOTICE

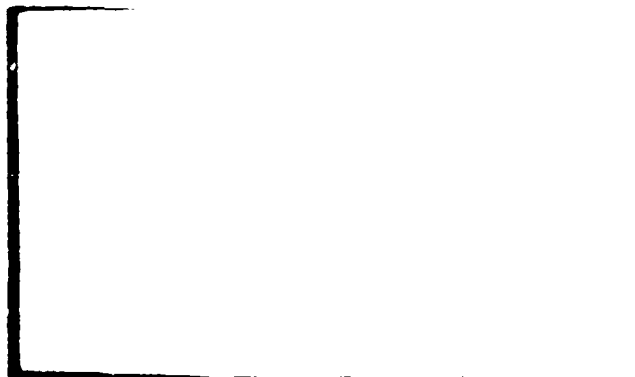


THIS DOCUMENT IS BEST  
QUALITY AVAILABLE. THE COPY  
FURNISHED TO DTIC CONTAINED  
A SIGNIFICANT NUMBER OF  
PAGES WHICH DO NOT  
REPRODUCE LEGIBLY.

REPRODUCED FROM  
BEST AVAILABLE COPY

219077

ADAU12868



DDC  
REFORMED  
JUL 25 1973  
RECEIVED  
D

**DISTRIBUTION STATEMENT A**

Approved for public release;  
Distribution Unlimited

Center for  
Research on  
Utilization of  
Scientific  
Knowledge

**CRUSK**

Reproduced by  
**NATIONAL TECHNICAL  
INFORMATION SERVICE**  
US Department of Commerce  
Springfield, VA. 22151

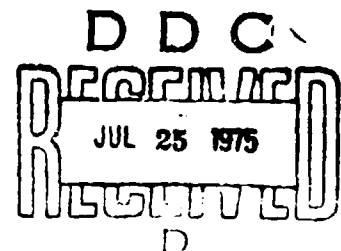
# SURVEY-GUIDED DEVELOPMENT: DATA BASED ORGANIZATIONAL CHANGE

David G. Bowers  
Jerome L. Franklin

Center for Research on Utilization of Scientific Knowledge  
Institute for Social Research  
University of Michigan

June 1975

This research is funded by the Office of Naval Research, Organizational Effectiveness Research Programs, under Contract No. N00014-67-A-0181-0013, NR 170-719 (Code 452). Reproduction in whole or in part is permitted for any purpose of the United States Government. This document has been approved for public release and sale; its distribution is unlimited.



REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Survey-Guided Development: Data Based Organizational Change		5. TYPE OF REPORT & PERIOD COVERED Technical Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) David G. Bowers Jerome L. Franklin		8. CONTRACT OR GRANT NUMBER(s) N00014-67-A-0181-0013, NR 170-719
9. PERFORMING ORGANIZATION NAME AND ADDRESS Institute for Social Research University of Michigan		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research, Organizational Effectiveness Research Programs (Code 452)		12. REPORT DATE June, 1975
		13. NUMBER OF PAGES 204
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) unclassified
		16a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) This document has been approved for public release and sale; its distribution is unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report summarizes and integrates a large body of knowledge drawn from theoretical formulations, empirically based research, and field experience to describe a data-based approach to organizational development. Termed "survey-guided development," this approach entails several facets including (a) measurement based on a validated model of organizational functioning, (b) use of organizational members as change-agents fulfilling a "transducer"		

20. Abstract (continued)

role, (c) thorough preparation of organizational members prior to the utilization of data, (d) survey feedback procedures implemented at the work group level, (e) diagnostically based interventions, and (f) evaluation of progress and corrective measures as integral aspects of the organizational development effort.

## TABLE OF CONTENTS

Chapter	Page
1. PROLOGUE . . . . .	1
2. THE ORGANIZATION AS A SOCIAL SYSTEM . . . . .	25
3. THE NATURE OF CHANGE . . . . .	51
4. SYSTEMIC DIAGNOSIS . . . . .	79
5. THE ROLE OF THE CHANGE AGENT . . . . .	107
6. SURVEY FEEDBACK . . . . .	131
7. THE EVALUATION OF SYSTEM INTERVENTIONS . . . . .	145
8. PAST EVIDENCE, PRESENT PRACTICES, AND FUTURE NEEDS . .	167
REFERENCES . . . . .	205

## PREFACE

Since the mid-1960's, the Organizational Development Research Program of the University of Michigan's Institute for Social Research, and its predecessor, the Business and Industry Group, have been engaged in applied research on the problem of planned organization change. Much has happened, much has been learned, and much remains unfinished.

When this effort was launched a decade ago, it found available, to be enlarged and built upon, several assets. There was, for one thing, a body of findings concerning organizational behavior, findings which had recently been integrated by Rensis Likert into a major theoretical statement on management practices. There was also a pool of experience with survey feedback, dating back more than 15 years, but largely unreported and unsystematized. There was, beyond this, a broader array of practices and strategies available from and for the then budding organizational development profession, an array which was available to the project staff as well.

Balancing these assets were certain distinct liabilities. First, while there was a sizeable amount of practice and application, there was little that could be classified as real research on organizational development. Second, this fact showed itself in the staffing of the project; application work tended to be undertaken by change agents who had emerged principally from line and staff industrial positions and for whom research was not the topmost priority. Research, on the other hand, was the responsibility of a very young staff, most of whom had come from conventional organizational behavior research backgrounds. These contrasting interests did not always match and merge constructively. Finally, much of the time in the early years of the effort was necessarily consumed in staff training and instrument



construction, activities which, though necessary, do not directly generate research product.

Now, however, the situation is different. A considerable volume of real research has flowed from the base built in the early years. Some has been published; other portions remain to be published. The whole seems at this point reasonably coherent, consistent and persuasive. It describes a body of scientific knowledge concerning change theory and practice which (a) employs interpersonal process consultation skills but is not limited to them; (b) uses survey feedback but is much more than that, and (c) views organizational theory as a necessary companion to any organizational change effort. Taken together, the constructs of this body of knowledge form survey-guided development, and in this brief volume we attempt to describe and define it as it is presently viewed.

DGB  
JLF

Ann Arbor, Michigan  
June 30, 1975

## Chapter 1

### Prologue

This is a book which advocates a definite viewpoint. Those who are concerned, involved in, and familiar with the field generally known as "organizational development" will find that it contains a number of propositions which are somewhat at odds with commonly accepted views. For example, it recommends no particular development technique or training practice, such as the T-Group or job enrichment, adopting instead an eclectic stance which holds that a wide variety of different inputs may be useful, depending upon diagnosed client need. It places great emphasis upon measurement, and in that vein holds that rigorously instrumented diagnosis has no peer as a procedure for determining client need. It proposes that the survey (of organizational perceptions, conditions, opinions, and attitudes) may most profitably be seen in an organizational development context as a servomechanism capable of guiding the system in its mid-course corrections. It stresses the importance of gearing the change effort to a set of evidence-based principles of organizational structure and functioning, principles which in toto comprise a "model" of how the organization works. In this connection, it holds to the view that "ownership" (the acceptance and acknowledgement of one's current state and commitment to the proposed course of activity) is in large part a matter of model-acceptance and, as such, must be firmly in place prior to intervention, not generated as a by-product of it. Finally, it identifies a very special role for the change agent, resource person, or interventionist, and differentiates it from other roles which are also seen as crucial

to organizational development. In this introductory chapter we propose to explore these issues briefly, in the process laying a groundwork for the chapters which follow and in which these and allied matters are treated in considerably greater detail.

### Perspectives in Organizational Development

As it exists today, organizational development in various forms and practices includes many common values and goals. There is also, however, a considerable degree of difference in the various concepts, procedures, and assumptions that are identified within this field. The common elements reflect to some extent the fact that those engaged in the field share some aspects of their backgrounds. The differences reflect different evolutionary streams from which the practice of organizational development has emerged. Much of what is currently considered within the realm of organizational development can be traced to the fields of adult education, personnel training, industrial consultation, and clinical psychology. The field now represents a crystallization of the experiences of practitioners from these fields. Examples of the techniques and procedures that have evolved in this way include sensitivity training, human relations training, team development training, process consultation, and role playing.

Some portion of what may presently be considered organizational development came into existence through a different route. This route is perhaps best described as a concern for the utilization of scientific knowledge. This data-based type of development, and specifically the survey feedback technique, originated not from the search by practitioners for more effective helping tools, but from the concern of organizational

management researchers for better ways of moving new scientific findings from the producers (researchers) to the consumers (organizational managers).

This view is clearly spelled out in the prospectus which launched the organizational behavior research program at the Institute for Social Research over 25 years ago:

The general objective of this research program will be to discover the underlying principles applicable to the problems of organizing and managing human activity. A second important objective of the project will be to discover how to train persons to understand and skillfully use these principles (Survey Research Center, 1947, p. 2).

The major emphasis during the last four years of the project will be on the experimental verification of the results and especially on learning how to make effective use of them in every day situations .... Each experiment will be analyzed in terms of measures made before and after the experiment and often a series of measures will be made during the experiment (p. 10).

The entire progress of our society depends upon our skill in organizing our activity. Insofar as we can achieve efficiently through systematic research new understandings and skills instead of relying on trial and error behavior, we can speed the development of a society capable of using constructively the resources of an atomic age. Unless we achieve this understanding rapidly and intelligently, we may destroy ourselves in trial and error bungling. Understanding individual behavior is not enough, nor is an understanding of the principles governing the behavior of men in small groups. We need generalizations and principles which will point the way to organizing human activity on the scale now required (p. 12).

This same prospectus also stated that the basic measurement tool to be used in the proposed studies would be the sample survey, employing procedures that the proposers had developed during their years with the Program Surveys Division of the Department of Agriculture, and that the study design would be generally like that employed by Rensis Likert in the Agency Management Study (Likert and Willits, 1940).

Thus the stage was set for an organizational development emphasis that first engaged in scientific search for principles of organizational management, and then, once such principles were established, set forth to identify effective implementation strategies for them. This plan was provided impetus by real life circumstances. Researchers rapidly discovered that the generation of sound findings regarding organizational management was one thing, and their implementation quite another. Two factors seriously diminished the effective use of early findings. First, although survey items referred to work-world events, there was often no readily accepted "map" tying what was measured to operating realities in ways that were readily understood. Second, since there was a lack of implementation procedures geared to the data, presentation of findings normally involved a narrative report. As a result of both of these factors, there was a great propensity either to file the report away, to pass it along to lower levels accompanied by vague directives to "use it," or simply to seize selectively upon bits which reinforced managers' existing biases (Katz and Kahn, 1966).

#### The Nature of Survey Feedback

In an effort to solve this problem, Floyd Mann and his colleagues at the Institute for Social Research developed the survey feedback procedure as an implementation tool. No authoritative volume has as yet been written about this development tool. Partially as a result of this absence of detailed description, many persons mistakenly believe that survey feedback consists of a rather superficial handing back of tabulated numbers and percentages, but little else. On the contrary, where employed with skill and experience, it becomes a sophisticated tool for using the data as

a springboard to development. Data are typically tabulated for each and every work group in an organization, as well as for each combination of groups that represents an area of responsibility, including the total organization.

Each supervisor and manager receives a tabulation of this sort, containing data based on the responses of his own immediate subordinates, together with documents describing the measures, their basis and meaning, and suggestions concerning their interpretation and use. A resource person, sometimes from an outside (consulting) agency and at other times from the client system's own staff, usually counsels privately with the supervisor-recipient about the contents of the package and then arranges with him a time when that supervisor may meet with his subordinates to discuss the findings and their implications. The resource person attends that meeting to provide help to the participants, both in the technical aspects of the tabulations and in the process aspects of the discussion.

Procedures by which the feedback process progresses through an organization may vary from site to site. In certain instances a "waterfall" pattern is adhered to, in which the process is substantially completed at high level groups before moving down to subordinate groups. In other instances feedback is more or less simultaneous to all groups and echelons.

By whichever route it takes, an effective survey feedback operation sees the organization's groups move, by a discussion process, from the tabulated perceptions, through a cataloguing of their implications, to commitment for solutions to the problems that the discussion has identified and defined.

### The Necessity of Differential Diagnosis

From these general and specific concerns there has emerged a viewpoint, largely identified with persons associated with the Institute for Social Research, that constructive change is measurement-centered, beginning with a quantitative reading of the state of the organization and direction of movement. Even more than this, it is throughout a rational process that makes use of information, pilot demonstrations, and the persuasive power of evidence and hard fact.

A successful change effort begins with rigorous measurement of the way in which the organization is presently functioning. These measurements provide the material for a diagnosis, and diagnosis forms the basis for the design of a program of change activities.

A major reason for the importance of the diagnostic step early in the life of a change program is that it will increase the probability of focusing upon the right, not the wrong, problems, and that it will add to the likelihood of the right, not the wrong, course of treatments being prescribed. A clear statement of the problems, courses of action, and change objectives, based upon sound measurements allied to the best possible conceptualization from research and theory, will maximize the likelihood that true causal conditions, rather than mere symptoms, will be dealt with.

### The Rationale for Survey-Guided Development

The preceding sections have pointed to the existence of two somewhat different approaches to organizational development. One, growing out of applied practice, is more obviously identified with the laboratory approach to education. It uses the immediate behavior (verbal, non-verbal, and

feelings expression) of the participants as the source material around which development forms. It focuses much more upon the "here-and-now" than upon the "there-and-then," and emphasizes experience-based learnings. It focuses more sharply on issues related to inter-personal processes than upon those less observable issues of role and structure.

The other approach, that which we propose to elaborate in greater detail, is more obviously related to an information-systems approach to adaptation and uses participants' summarized perceptions of behavior and situation on fixed dimensions over some time period as the source material around which development is focused. It focuses upon the "there-and-then" at least as much as upon the "here-and-now," attaches considerably more importance to cognitive understanding than does the other approach, and is concerned with such issues as role and structure, at least as much as with those of inter-personal process.

These brief identifications are more descriptive than explanatory. A true understanding of the survey-guided approach requires that we look more closely at the assumptions which it appears to make and the operating propositions that it derives from those assumptions.

Like most organizational development techniques, survey feedback is only one aspect of a measurement-guided approach to change. As a tool or procedure it emerged as a response to a practical need to see research findings implemented. It did not emerge as the logical conclusion of a formal body of scientific thought. It remains for us presently to search, after the fact, for a rationale about how and why it works.



### Change as an Adaptation Process

In this vein, two bodies of scientific thought seem relevant. One comes from the research done in the area of perception and involves the fundamental concept that a difference between perceptions is motivating--an idea originally and most clearly stated by Peak (1955). This is perhaps best illustrated by the following example: if I perceive, on the one hand, that I cannot complete a particular piece of work by the end of the normal work day and perceive, on the other hand, that that work must be complete by the start of office hours in the morning, I am motivated to work late or to take home a work-loaded briefcase.

According to this view, the perceptions must be associated, i.e., they must be seen as belonging to the same "domain." I may perceive that I do not play the piano as well as Artur Rubenstein, but this discrepancy is hardly motivating, because I do not consider myself to be a professional concert pianist. Although associated, the perceptions must be different, yet not so different as to destroy their association. The perceptions may be related to emotion-laden or "feelings" issues, or they may consist of different perceptions of conditions in the external world. Peak illustrates the process by drawing an analogy:

Think of a thermostat. Here there are two events. One is the temperature setting (an expected state if you will). The other event or term in the system is the height of the mercury in the tube, representing the present state of affairs (room temperature). These are analogous then to the two events in our motive construct, and disparity exists between them when there is a difference in the setting and in the temperature reading. Now, the second feature of our motive construct,

which is called contact or association, is provided by the structure of the thermostat and is not modifiable in this system as it is in the motive system. In other words, the two terms (or events) remain in association. Only disparity can vary, and when there is disparity there is "motivation" and action; i.e., the furnace starts to run. The results of this action are fed back to produce change in one of the terms of the disparity relation (the mercury level). When the disparity disappears through rise in temperature or resetting of the thermostat, action ceases... But since the thermostat lacks the capacity to stop action through isolation, and in the simple design we have described, cannot select different actions, the model must be regarded merely as illustrative... (1955, pp. 172-173)

Another closely related set of ideas comes from engineering psychology and begins with the observation that human behavior is goal-seeking or goal-oriented. As such, behavior is characterized by a search for processes by which the human being controls his environment, i.e., means by which he reshapes it toward more constructive or productive ends.

Oversimplifying the control process greatly, at least four elements are involved: (1) a model, (2) a goal, (3) an activity, and (4) feedback. The model is a mental picture of the surrounding world, including not only structural properties, but cause-and-effect relations. It is built by the person(s) from past accumulations of information, stored in memory. From the workings of the model and from the modeling process which he employs, alternative possible future states are generated, of which one is selected as a goal. At this point what is called the "goal selection system" ends and what is known as the "control system" per se begins. Activities are initiated to attain the goal, and feedback, which comes by some route from the person's environment, is used to compare, confirm, adjust, and correct responses by signaling departures from what was expected.

The process as just described is beguilingly simple. However, in actual life it is often extremely complex. The thermostat example, although embodied in a marvelous and valuable piece of equipment, is basically a simple instance of an adaptive system. Others are much more complicated, such as that contained in the role of a Mississippi river boat pilot. The shifting character of currents and channels make this adaptive task quite complex. Therefore the difficulty in this as in other complex systems stems from not having learned how to predict system performance under various conditions. As one of the foremost human factors writers has described it, "The ability to predict system performance is in major respects the same as the ability to control the system" (1968, p. 42).

The human organization reflects the same type of complex, difficult control system, in part for these same reasons. Activity is only as good as the model which leads to it, yet human organizations are often managed according to grossly imperfect models (models which ignore much of what is known from research about organizational structure and functioning).<sup>\*</sup> Predictability is enhanced, in human systems as elsewhere, by quantification, yet many of the relationships are often not quantified, if, indeed, they are recognized at all.

In the absence of a sound model, what is expected varies with immediate experience. It is for this reason that objective feedback on organizational functioning is absolutely essential in organizational development. In its absence, true deviations are unknown because expectations constantly adjust to incurred performance.

---

<sup>\*</sup>It should be recognized that the term "model" may refer to any of a wide range of alternatives, from very simple predictive notions (e.g., "a democratic supervisor gets results") to quite complex theories, such as Likert's System Four.

This point is sufficiently important and so often unrecognized that it deserves underscoring by illustration. Let us imagine a small plant engaged in the assembly of auto components, and turn our attention specifically to two functions within it: production and production control. In this particular instance, the plant is experiencing problems in meeting an externally-set production schedule. The plant manager, whose personality, methods, and philosophy dominate the local scene, is away on an extended vacation. Consultants, brought in during these circumstances by the corporate body, assess the situation and conclude that much of the problem originates in a hostile, rivalrous conflict between the two functions mentioned earlier. Each blames the other for the difficulty, and, in an effort to "keep its own skirts clean," creates precisely those conditions which escalate the situation. The model which the consultants are working under is one which holds that cooperative problem-solving resolves conflict and promotes effectiveness.

Unfortunately, the model prevalent in the plant is that adhered to by the plant manager, a blood-and-iron model which holds that effectiveness is largely a function of unimpeded operation of the hardware, and that surveillance prevents the occurrence of impeding conflict. No objective information feedback on these points is available.

The result is predictable. The consultants and their problem-solving efforts will be tolerated (because of corporate backing) until the plant manager's return. When that occurs, the general judgment will be that the problem, if there is one, reflects their having lowered their surveillance during his absence and allowed the consultants to stir up distracting conflict.

In terms of the point at issue, a different model from the one under which the consultants are operating is accepted, no objective feedback is available, and expectations have simply adjusted to incurred performance. Nor is this an isolated instance: many organizational development failures may, perhaps, be attributed to precisely this point. Morale surveys, consisting of a "shot gun" collection of satisfaction-dissatisfaction items and geared either to no particular model or to a model not accepted in advance by the participants often end up on the developmental scrap heap. Young change agents, enamoured of encounter techniques and working with the rather reserved persons who typically populate upper-middle management, often find themselves rejected and the development effort which they are attempting to serve foundering for the same reason. What to the participants is "confronting" is to the change agents superficial, and what is confronting to the change agents is viewed by the participants as an outrageous assault upon identity. The process may even be successful (You see, you do feel better having expressed all of those pent-up feelings, don't you?); the point is that, for the participants, the down-deep model which they likely accept is one which says that this sort of thing is bad, and enjoying it is even worse! Lacking the change agents' model and lacking external, objective feedback geared to it, their expectations will simply rise and fall accordingly. Performance, on the other hand, will go on much as always.

From this very condensed discussion, it is apparent that, when organizational change is viewed as a problem in optimal control or adaptation (which it inherently is) several things are required:

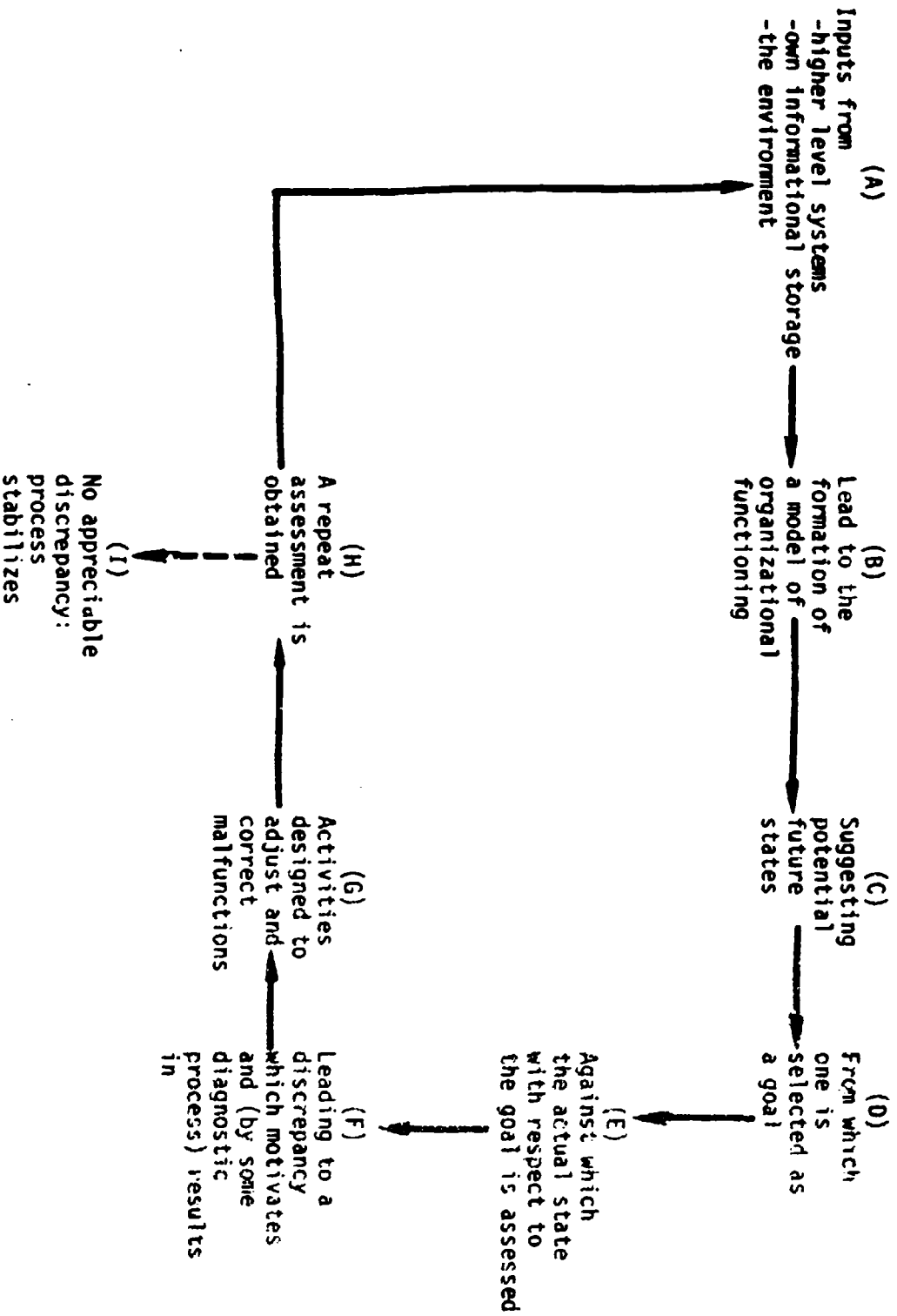
- An adequate model--one which is a valid representation of that external reality known as "the organization," including both structural properties, knowledge of cause-effect relations, and predictive capability;
- A goal--a preferred potential future state, generated by the model;
- An activity--selected as instrumental to attaining that goal;
- Objective feedback--about deviations from what the model would lead us to expect.

The process is approximated in Figure 1. In detail, as in general, organizational development may be seen as an analogue of adaptation as described by human factors theorists. What they have termed the "goal selection system" is, in organizational development the diagnostic process, comprising steps (A) through (E) in the Figure. What they have referred to as the "control system" is the therapeutic process, indicated by steps (F) through (I) and/or back to (A) in that same diagram.

These two sets of concepts--the one drawn from basic work in the area of perception, the other taken from the human factors work of engineering psychology--provide jointly a plausible rationale for organizational development as an adaptive process. As in the human factors area, feedback of information about the actual state of functioning provides key input to selecting development goals and making mid-course corrections. It tells the developing system what needs to be done. The power source, which in human factors descriptions is shown as an external input, is in organizational development provided by the sort of

Figure 1

# The Adaptation Process in Organizational Development



discrepancy described by Peak. Assessment data, by pointing to the existence of differences between what is actually going on and what the model indicates one wants and needs, provides the energy (motivation) to undertake change activities.

To serve its function within the diagnostic process, the work group draws inputs from the same sorts of areas drawn upon by all adaptive systems:

- From higher-level systems: from the larger organization, its top management, and from society in general in the form of performance trends, top management evaluations, labor relations trends, changes in laws or regulations, etc.
- From its own information about the model which they have thus far accepted, as well as information concerning past experiences and results.
- From a reading of how things actually are, from the survey, a reading which occurs at two "levels": the level of the face-to-face group, which is the basic building block of organizational life and in which the data utilization process is essentially a problem-solving one dealing largely with intragroup behavior, attitudes, and relationships; and the level of the system as a totality, in which the data ordinarily take the form of a more formal diagnosis (an analytic report prepared by persons skilled in the interpretation of data) which deals with intergroup and systemic properties.



- From the environment: in many forms, but particularly from the market place and from the accumulated body of knowledge about organizations, their functioning and their change.

Each of these input sources has potential impact by virtue of its presence or comparative absence, its kind, and its quality. For example, the higher level system inputs ordinarily create some degree of felt urgency. Often, discrepancy generated by this input motivates the initial search and culminates in serious consideration of organizational development as a possible course of action. The extent to which these inputs encourage the development efforts of the client entity is also critical. Many of the development failures occur in instances in which higher-level system inputs are either lacking, which indicates merely acquiescence, or instead, are signaling outright disapproval of organizational development. A general example of such an instance might involve a supervisor who verbally acquiesces to an organizational development effort for his subordinates but behaves and rewards his subordinates for behaving in ways which are incongruent with the values, assumptions, and goals that are emphasized in organizational development. Efforts that proceed in the face of such higher-level system inputs run a great risk of death by neglect, if not by intent.

From the group's own information storage comes the model of organizational functioning already held by group members. This includes information regarding past organizational practices (behaviors, interaction patterns, managerial styles) as well as outcomes at various levels of finality (absenteeism, turnover, profit, production efficiency, growth, etc.).

The survey provides a means by which multiple perceptions of behaviors and organizational conditions related to effectiveness can be gathered,

compiled, and compared. As has been indicated above, one must consider not one, but two, separate input streams from the survey. One of these consists of the survey feedback process itself, in which tabulations of the group's own data, especially concerning its internal functioning, is used as a springboard to the identification, understanding, and solving of problems. The other consists of a more formal diagnosis, prepared by persons skilled in multivariate analysis and focusing upon those problem streams which occur in the system as a whole, and which can be seen only by careful comparison of the tabulated data of many groups.

#### The Change-Agent's Role

The complexities of organizational functioning and change processes in large social systems require assistance in adaptation beyond what is usually needed in manual control situations. Change-agents fill these needs by bridging the gap between bodies of knowledge and specific organizational situations. These individuals assist organizational members in understanding survey data and guiding changes from current states of functioning toward selected goals.

The change agent's role includes major educational and motivational components. They provide information to establish a knowledge-based model of organizational functioning, present available alternatives for making organizational improvements, and share other expertise needed at various stages in the change process. Further, they provide inputs to establish and maintain a motivational gap to provide impetus for movement toward change goals.

The manner in which the change agents fulfill their functions is extremely important. Although they are goal oriented, change agents must have the knowledge and skills to work toward goals in a way that is viewed as supportive by members of the organization.

### Survey-Guided Development - A Recapitulation

As the preceding pages have indicated, the survey-guided approach suggests several general propositions regarding (a) certain basic assumptions of organizational development; (b) change processes; and (c) the change agent's role.

#### Basic Assumptions of Organizational Development

- There are systemic properties (i.e., characteristics of the organization as a total system) not defineable by the simple sum of individual and/or group behaviors.
- A model of organizational functioning which includes these systemic properties, reflecting available evidence and testable by quantifiable and scientific means, should be used as a basis for development efforts.
- Systemic properties in particular can improve only as a result of carefully sequenced planned interventions.
- Valid information about the state of group and organizational functioning (objective and useful reflections of reality) is best obtained from summarized, quantified longitudinal perceptions. (There-and-then data is at least as useful as here-and-now data.)
- A diagnosis based upon a quantitative comparison with the model and prepared by competent professionals should be used to evaluate the organization on both intragroup and systemic levels.
- Prescription of intervention activities should be diagnostically based.

### Change Processes

- Motivation is created by the realization that the actual state differs from the accepted model (i.e., a discrepancy exists between that which is desired and that which exists).
- The discrepancies exist in terms of both intragroup and systemic processes and properties.
- Change involves a sequence of events including informational inputs, formation of a model, selection of a goal, assessment of the situation, formation of a diagnosis, feedback, adjustment, and re-evaluation.

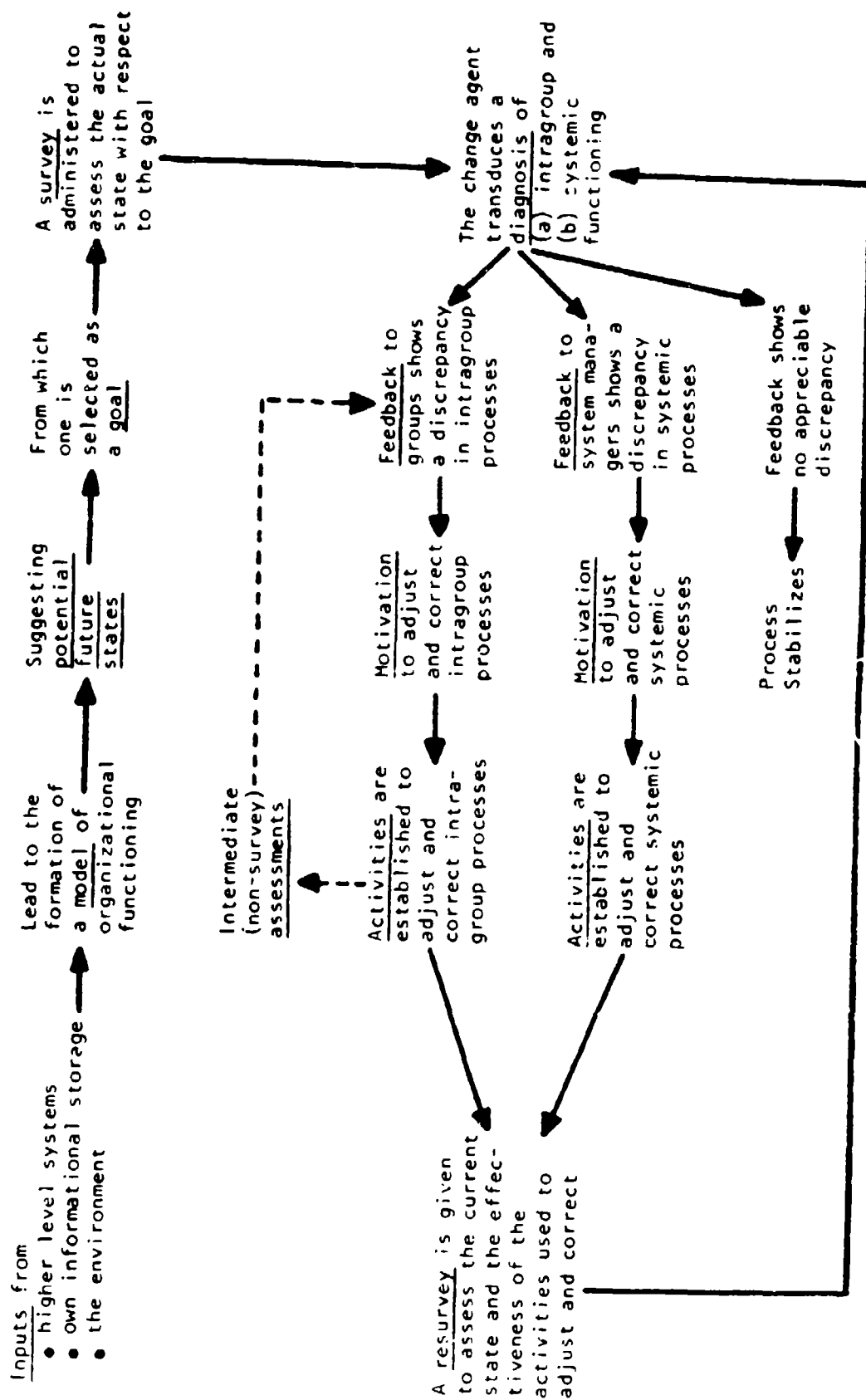
### Change Agent Role and Activities

- The change agent acts as a transducer between scientific knowledge regarding organizational functioning and change processes, on the one hand, and the particular situation on the other.
- He has a model of organizational functioning and works toward its realization.
- Except in those rare instances which require a non-directive stance, the change agent is an active advocate of goal-oriented behavior. He evaluates and helps the client group to evaluate progress toward the goal, but he is not punitive.  
He must have a wide range of knowledge and skills and not be bound to one or two particular techniques.

These general propositions of survey-guided development are illustrated as a flow of events in Figure 2.

Figure 2

# SURVEY-GUIDED DEVELOPMENT



### Perspective and Prologue

If what has been presented in the preceding pages appears complicated, it is because the issues involved in systematically improving large systems are complex. This reflects our strong belief that organizational development is rightfully becoming more a science than an art. This view was expressed several years ago by one of the authors:

By science I mean discernible in replicatable terms, objective, understandable (rather than "mystique"), verifiable and predictive. Should these conditions for organizational development fail to be met, it will go the way of the Great Auk and the "Group Talking Technique." In short, organizational development will die, having been remembered as one more fad.

Organizational development cannot survive on the good will of top management persons who are already sold on its potential and effectiveness. It can survive only if it proves its method and its contribution beyond reasonable doubt to the hard headed skeptics. Organizational development must prove with hard, rigorous evidence that it can beneficially affect: (a) the volume of work done by the organization, (b) the cost per unit of doing the organization's work and (c) the quality of work done (Bowers, 1971, p. 62).

The same article described barriers which, up to that time, had impeded the progress of organizational development as a science.

- (a) The lack of a "critical mass" of knowledge in the field
- (b) The tendency for organizational development to take the form of a single general practitioner, operating on an isolated island
- (c) The absence of rigorous, quantitative description of what it is that change agents do
- (d) The absence of an adequate measuring instrument, geared to an adequate model of organizational functioning, for use in organizational development efforts

Within the last decade, considerable progress has been made on each of these fronts. Books and articles, describing and integrating findings in this field, have appeared in increasing numbers and richness. To the extent that our own experience is typical, there have emerged with greater frequency opportunities for researchers and change agents to collaborate in multi-faceted, large system development efforts. Efforts have similarly been undertaken by a number of persons to develop procedures and instruments for rigorous description of change agent interventions and their immediate effects. Finally, we feel that survey-guided development has pressed, from its own necessity, the construction of reliable, valid, standardized instruments for assessing organizational functioning. The availability of such instruments, together with the accumulating critical mass of knowledge, leads us to considerable optimism concerning the future of organizational development in general and specifically the survey-guided approach.

#### Recapitulation and a Roadmap

These, then, are in preview form some of the issues which this volume attempts to address. Organizational development is defined as providing a potentially wide array of different inputs to various persons, groups, and junctures of the organization, at precisely those times at which they will be maximally useful. To do so requires an accurate and reasonably complete model of how an organization functions. It requires as well a rigorous, instrumented diagnosis and evaluation procedure to monitor the development process. Because the behaviors and perceptions which enter the model are in large part those of human beings, the method of the survey (geared, as it

is, to measuring things of precisely that kind) is proposed as a guidance device or servomechanism for organizational development efforts. In this context, the change agent's role becomes that of a link to knowledge resources otherwise insufficiently available to the organization.

It is these issues which the remainder of the report will describe and discuss. In the next chapter we shall treat the issue of what constitutes an appropriate model of the organization as a functioning social system. In the chapters which follow, we shall sketch the basic dimensions, as we see them, of change as a general problem in organizational life, systemic diagnosis and the prescriptive processes which accompany it, the role of the change agent in this form of development, and the evaluation of system intervention. In the final chapter, we shall conclude with a look at the future, as we believe it must profitably be.



## Chapter 2

### The Organization as a Social System

The preceding chapter has suggested that organizational theory plays a crucial role in the survey-guided development process. Since it obviously is the thesis of this procedure that development occurs in relation to a goal and that goals are set in terms of a model of how the organization functions, it follows that systemic models, and the theory that generates them, are of extraordinary importance.

#### Basic Concepts of Social Systems

Any discussion of an organization as a social system runs the immediate risk of running to great length and exceeding complexity. In the present instance it is our hope to avoid these hazards, even at the risk of oversimplification. What will be presented is not all of the critical concepts which occupy the thinking of organizational systems theorists, but rather only a few of the most basic and essential notions, simply stated.\*

According to a systems viewpoint, there are only two fundamental processes in organizational life: action and communication. Action is the movement of some form of matter or energy across space. Communication is similarly the movement of information across space. Since movement across any space takes time, both action and communication involve movement across time as well as space. Furthermore, information is always carried upon some physical object (i.e., some form of matter) called a "marker," and

---

\*For a more complete discussion, see Baker (1973).

the two processes--action and communication--go inextricably together. Finally, communication often involves converting information from one form to another.

Action may involve non-human or human matter and energy. When it is non-human, we find ourselves discussing the technical system--the hardware or materials, for example, a topic which largely lies beyond our present purpose. However, when the matter or energy is human, it is the social system of the human organization that is at issue, and that is our present concern. The movement of human matter-energy across space-time is behavior, and it is this of which human organizations are made.

If behavior and communication were uniformly distributed in the space of an organization's life, our analytic and conceptual problems would be much simpler (and life much less interesting). It is not so, however; organizations are much more colloidal than that. For one thing, human matter-energy (behavior) tends to accumulate non-randomly in various regions of physical space and time. There are, in other words, little "knots, clumps, and clusters" of behavior scattered here and there. These accumulations form components of structure, and various parts of structural units relevant to a particular function are involved in what is called a subsystem.

In addition, more complex systems at higher levels--such as groups and organizations--display characteristics called emergents. An emergent is a characteristic which, as the term implies, emerges from a combination of other things. "The whole is greater than the sum of its parts," states it nicely. Group process is one such emergent characteristic: for example, a group's adaptability as a team is something quite different from

the behavior of its separate members. Organizational climate--the milieu of policies and practices created by others and experienced by one's own group--is yet another example of an emergent characteristic in organizational life.

Considered from yet another perspective, any change over time of matter-energy or information in a system is a process. Some such changes are relatively permanent; aging, for example, cannot be reversed, and secrets cannot be "unlearned." Others are more reversible: a supervisor who has become more supportive may become less so; a bonus given one month may be withdrawn the next. The less easily reversed processes form history, which for organizations takes the form of fairly permanent changes in structure and function. In this sense, an organization carries its history with it. Its processes are partly historical, and its "here-and-now" cannot ignore the past, because the present is part of the accumulated past.

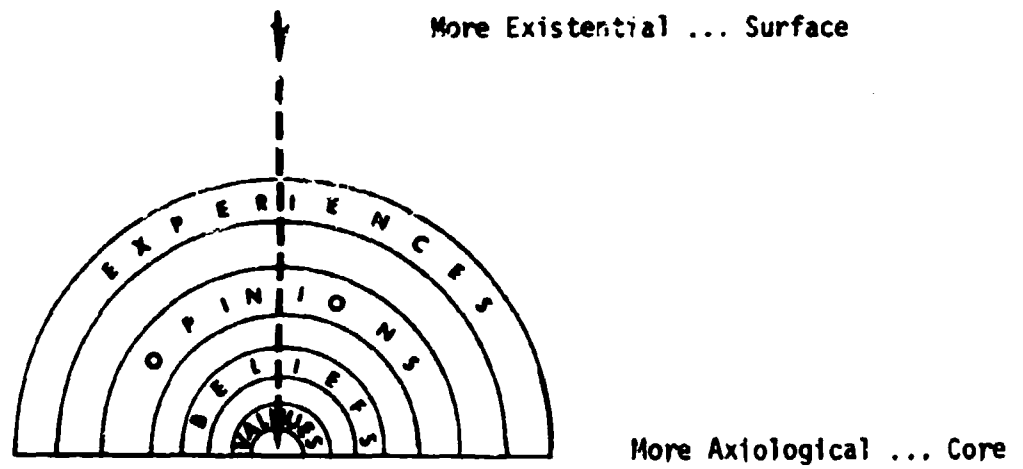
In organizations, as in systems in general, accumulated history, rewards, punishments and inputs from superordinate bodies give rise to a preference for a particular (and subsequently customary) internal steady state. In this sense, the way in which our world "works" tends to form our values, across time and with repeated experiences. Values emerge from the functioning of the system, and we develop a preference for our existing functional configuration. (This does not mean a preference for a static status quo; indeed, movement toward desired goals may be a part of the definition we give to our preferred and familiar functional pattern.) Although the events experienced are largely environmentally determined, these experiences "compact," and as they do so, move from the

more existential surface level to the more axiological core of one's value system. The contents, in other words, become more "dense" as the whole mass compacts toward the center. This process is illustrated in Figure 3.

The longer individuals remain in the same environment (i.e., the more constant the experiences) the more densely packed is this value space. When environment shifts, the pressure is removed, and an imbalance is created which causes the value structure in some measure to "weaken" and restructure itself. In this sense, our values and preferences shift and follow (with some lag) our experiences.

Incoming, "new" experiences are therefore assessed in terms of a set of values which represent a condensed configuration of all prior experiences. Feedback is a portion of any system's output which comes back--returns to it--as information input. Such feedback is positive if it increases deviation from a steady state. Negative feedback, on the other hand, is any feedback which decreases deviation from a steady state. (Note that this has nothing to do with praise or criticism, despite common usage of the terms. Telling a person that he's right on target, when he is, is negative, not positive, feedback. The notion that we only learn from criticism in a negative sense, and that this is true because of principles of negative feedback is fallacious in these terms. As was indicated above, the steady state against which deviation is assessed represents a condensed configuration of all prior experiences. It is this against which incoming negative feedback is matched to determine how much and what kind of effort is needed to restore the system to its "normal" state.

Figure 3  
Pictorial Description of the Relationship  
Between Experience and Values



Let us take five of the concepts thus far discussed--behavior, structure, emergent, values, and feedback--and illustrate them in terms of the life of a group in an organization. First of all, behavior--the movement of human matter-energy over time-space--occurs continually, day in and day out, in the group. The supervisor behaves in certain ways toward each of his subordinates singly, toward various combinations of them, and toward the collectivity as such. They in turn behave toward him and toward each other. The very facts that they behave more toward each other and less toward other individuals scattered elsewhere throughout the organization, and that their behavior is limited to certain kinds and forms (some forms never occur, for example) illustrates the "clustering" indicative of structure. Moreover, their behaviors produce emergent effects greater than their sum. Each member may vary his behavior in particular ways in response to certain events, but particular patterns of behavior variance represent adaptability on the group's part (an emergent property), whereas other patterns are indicative of rigidity (an alternative emergent). Over time, repeated behaviors and exposures to them become internalized as values, in the form of a customary, preferred configuration of practices, and feedback--information about how well they're doing--is compared to that customary configuration in order to decide next steps or midcourse corrections.

#### System 4: An Example of a Model

As used in the present instance, a model is a representation, in simpler form, of complex events, structures, experiences, and relationships that are presumed to occur in the real world. As such, it is an analogy--

only an approximation of the real thing. However, the greater its fidelity to reality, the more reliable and valid it is as a guide for those who propose to base action steps upon it.

Although a number of criteria might be proposed for evaluating the worth of any such model, several seem somewhat more important than others. For the purposes presently encompassed, a model should be:

- Applicable to the current setting:
- Reasonably comprehensive or broad in scope; its content should approximate the content of the real-world phenomena that it purports to represent;
- Fairly precise or unequivocal in its predictions, that is, containing fairly clear cause-effect implications. (Models dealing only in concomitants are less than useful for the action purposes presently in mind.)

The model which the authors employ and which has served as a basic anchor point for the development of the present body of theory and practice is one which has emerged over the last thirty years at the University of Michigan's Institute for Social Research. Contributions came from many scholars, of course, and the whole has been subsequently adapted and modified to reflect new evidence. Nevertheless, the clearest, most comprehensive statement of this body of thought is that found in the books authored by Rensis Likert (1961, 1967) and in a more recent summary by one of the present authors (Bowers, 1975).

This is a model based upon a theory which deals with the management system of the human organization. As such, it by and large does not deal with the management problem--does not slice the stuff of organizational life--in the ways in which it would be dealt with or sliced by personnel

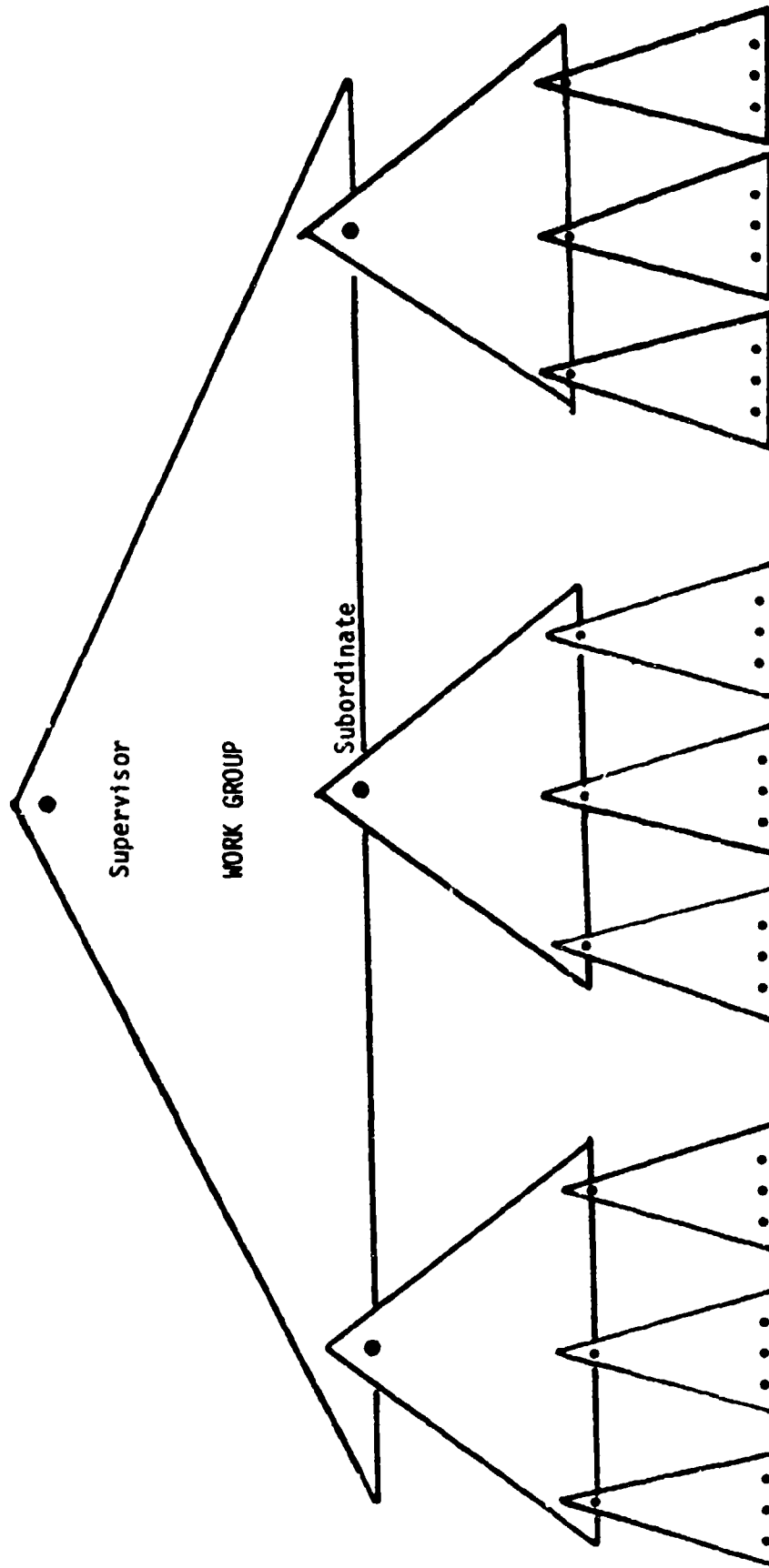
psychologists, engineering psychologists, personality theorists, or sociologists. Thus it is more concerned with influence and expectation than formal structure, more concerned with communication than information-transmission, more concerned with satisfaction than alienation.

If it slices the domain differently, it also orders it differently from the ways in which it might be ordered by others. Specifically, it regards leadership and the management system which emerges from that leadership process across persons and groups as the primary causal variables in organizational life. Other variable domains, considered by other theorists as independent or causal, it views as truly intervening. Thus personal values are seen as more molded by organizational experience than molding of it, and are therefore for the purposes presently envisioned primarily "intervening" in character. (They would, however, be independent and causal for a clinician treating an individual patient.) Jobs, tasks, and their structure are viewed by it similarly as among the most important of the intervening variables, on the grounds that these issues are largely decided or determined by the organization's management system, not put in place independently of it. (Again, if one is dealing with the individual person and his job performance, task design would be a "given"--an independent variable. For purposes of understanding the functioning of organizations as systems, however, this present theory would argue that individual performances are not additive to the group or organizational levels, and that organizational outcomes as such have a different causal stream.)

Figure 4 shows an organization as our research has indicated it to be. There are many things that an organization is not: it is not simply an



Figure 4  
WORK GROUPS FORMING AN ORGANIZATION

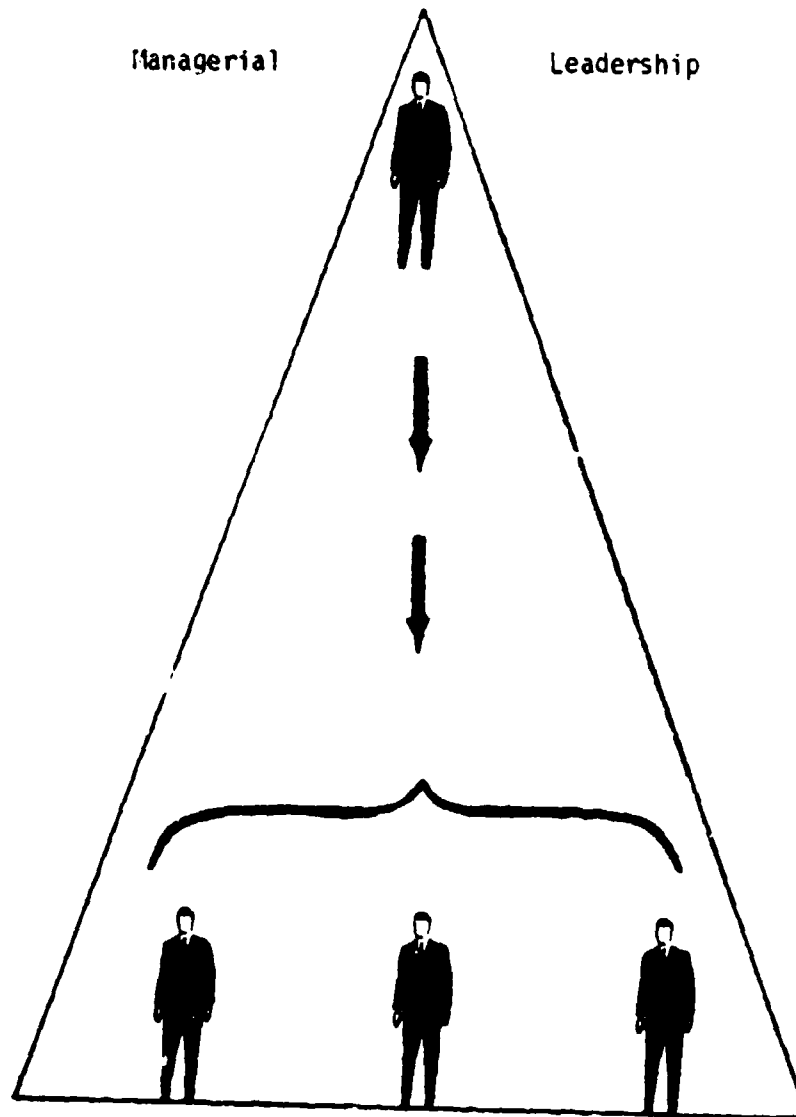


array of positions, not just an assortment of tasks, not just the physical assets--materials, money, buildings, and equipment. It includes all of these things, of course, but an organization is very basically a structure made up of work groups, indicated in Figure 4 by triangles. The triangles are shown as overlapping because, at every level above the very bottom, and below the very top, most persons are members of at least two groups simultaneously; they are subordinates in the group above and superiors in the group below. This dual membership serves the purpose of linkage, of knitting the organization together.

Within each group several kinds of things occur. First, there is Managerial leadership--behavior on the part of the supervisor which serves organizationally constructive ends. Second, and partly as a result of what the supervisor does, there is what we term Peer Leadership--behavior by one subordinate toward another which multiplies (for good or for ill) what the supervisor does. Third, there are group processes, those emergent properties which characterize the group as a group, whether it works together well or poorly. Finally, there is output from the group, in the form of individual outcomes (e.g., satisfaction, health) and organizational outcomes (e.g., efficiency, effectiveness).

Each of these factors has been the focus of scientific investigations and can thus be described in greater detail. Figure 5 provides a simple diagram indicating that managerial leadership as described herein refers to the behavior of a superior toward subordinates within a work group. Research has indicated that these behaviors can be described in terms of four categories:

Figure 5



Support - behavior toward his subordinates which lets them know that they are worthwhile persons doing useful work.

Interaction Facilitation - team building, behavior which encourages subordinates to develop close, cooperative working relationships with one another.

Goal Emphasis - behavior which stimulates a contagious enthusiasm for doing a good job (not pressure).

Work Facilitation - behavior which removes roadblocks to doing a good job.

In a similar vein, peer leadership behavior (illustrated in Figure 6) can be described by these categories:

Support - behavior by subordinates toward one another which enhances their mutual feeling of being worthwhile persons doing useful work.

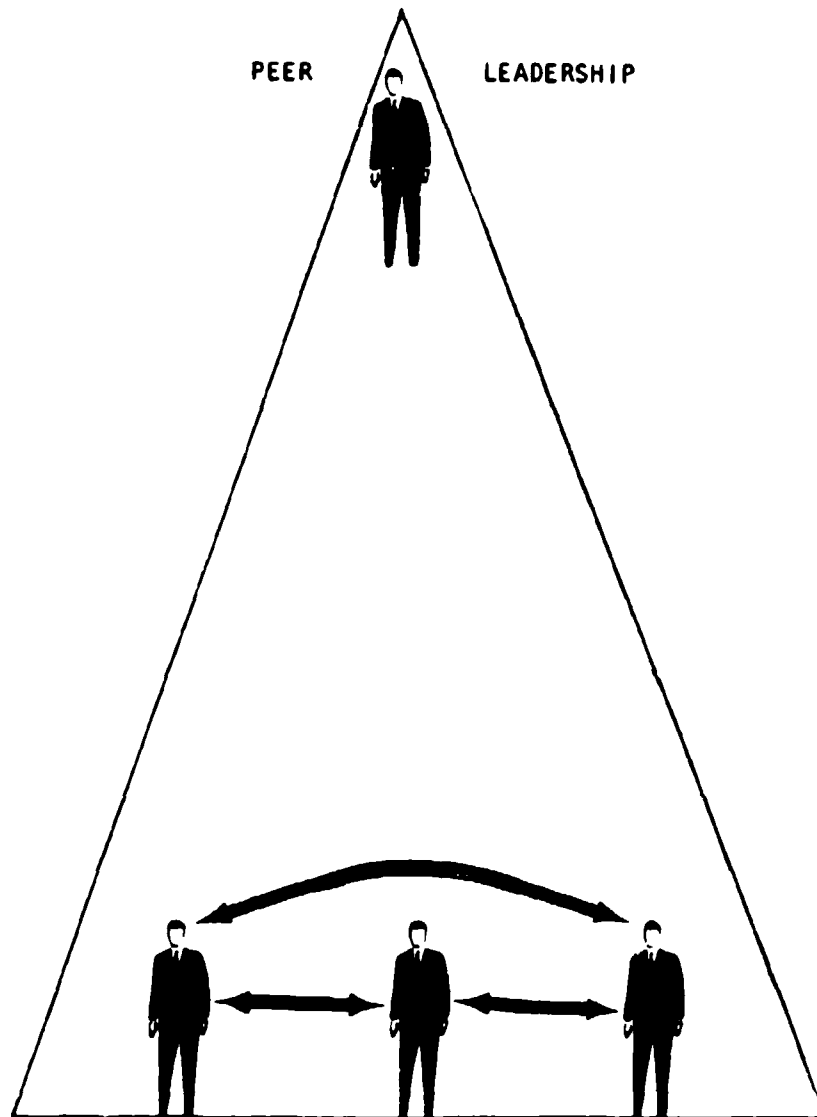
Interaction Facilitation - behavior by subordinates toward one another which encourages the development of close, cooperative working relationships.

Goal Emphasis - behavior by subordinates toward one another which stimulates a mutually contagious enthusiasm for doing a good job.

Work Facilitation - behavior which is mutually helpful; helping each other remove roadblocks to doing a good job.

These managerial and peer leadership behaviors occur within the context of a group which, in turn, is part of a larger organization. Each group exists in an environment made up of conditions created by

Figure 6

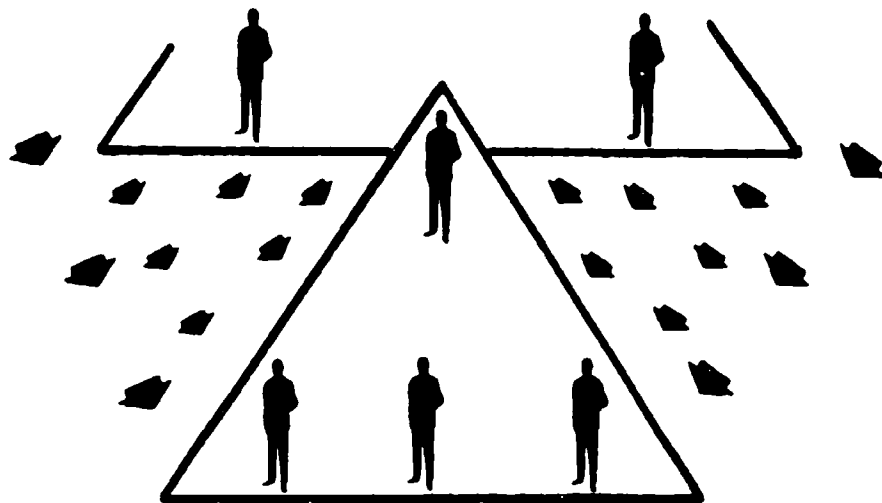


other groups, particularly those above it in the organization. This is illustrated in Figure 7. The focal group links through its supervisor, to the group above. The higher group produces an "output" which takes the form of behavior, procedures, decisions, objectives, and the like which impinge upon the focal group in the form of a set of conditions, for better or worse, within which it must exist. These effects are indicated by the smaller arrows. The larger arrows indicate that the focal group's environment is also the product of groups other than that immediately above--perhaps from the very top of the organization. This environment or set of conditions is called organizational climate. Our research reveals that it consists of the following elements:

- Human Resources Primacy - whether the climate is one which, by its postures and practices, says that people--their talents, skills, and motivation--are considered to be one of the organization's most important assets.
- Decision-Making Practices - how decisions are made in the organization: whether they're made effectively, at the right levels, and based upon all of the available information.
- Communication Flow - whether information flows effectively upward, downward, and laterally in the organization.
- Motivational Conditions - whether conditions and relationships in the environment are generally encouraging or discouraging of effective work.
- Technological Readiness - whether the equipment and resources are up to date, efficient, and well maintained.

Figure 7

## ORGANIZATIONAL CLIMATE



Lower-Level Influence - the influence which lowest-level supervisors and non-supervisory personnel feel they have on what goes on.

As a result of these conditions and behaviors--climate, managerial leadership and peer leadership--the organization functions in various ways. As Figure 8 illustrates, individual and organizational outcomes result from these conditions. If conditions are positive, the groups function well--they coordinate their efforts, they are flexible, adaptable, etc.--members are satisfied with various aspects of their work lives, and are productive. Negative conditions result in groups which function poorly, contain dissatisfied members and have poor outputs. The performance of the total organization may be thought of in terms of a composite of the functioning of all groups.

#### Relationships Among Major Factors

The model described in the previous pages delineates the basic social-psychological processes occurring within organizations and their major component elements. A thorough understanding of the meaning and nature of these elements is critical for understanding how organizations function. Yet, even the fullest understanding of the separate elements is not sufficient without the additional knowledge of how the pieces fit together to describe organizations as functioning entities consisting of conditions, policies, and behaviors integrated through a network of cause/effect relationships.

The nature of these relationships can be described in part through a consideration of processes within a single work group. Figure 9



Figure 8

## GROUP AND SYSTEM OUTPUTS

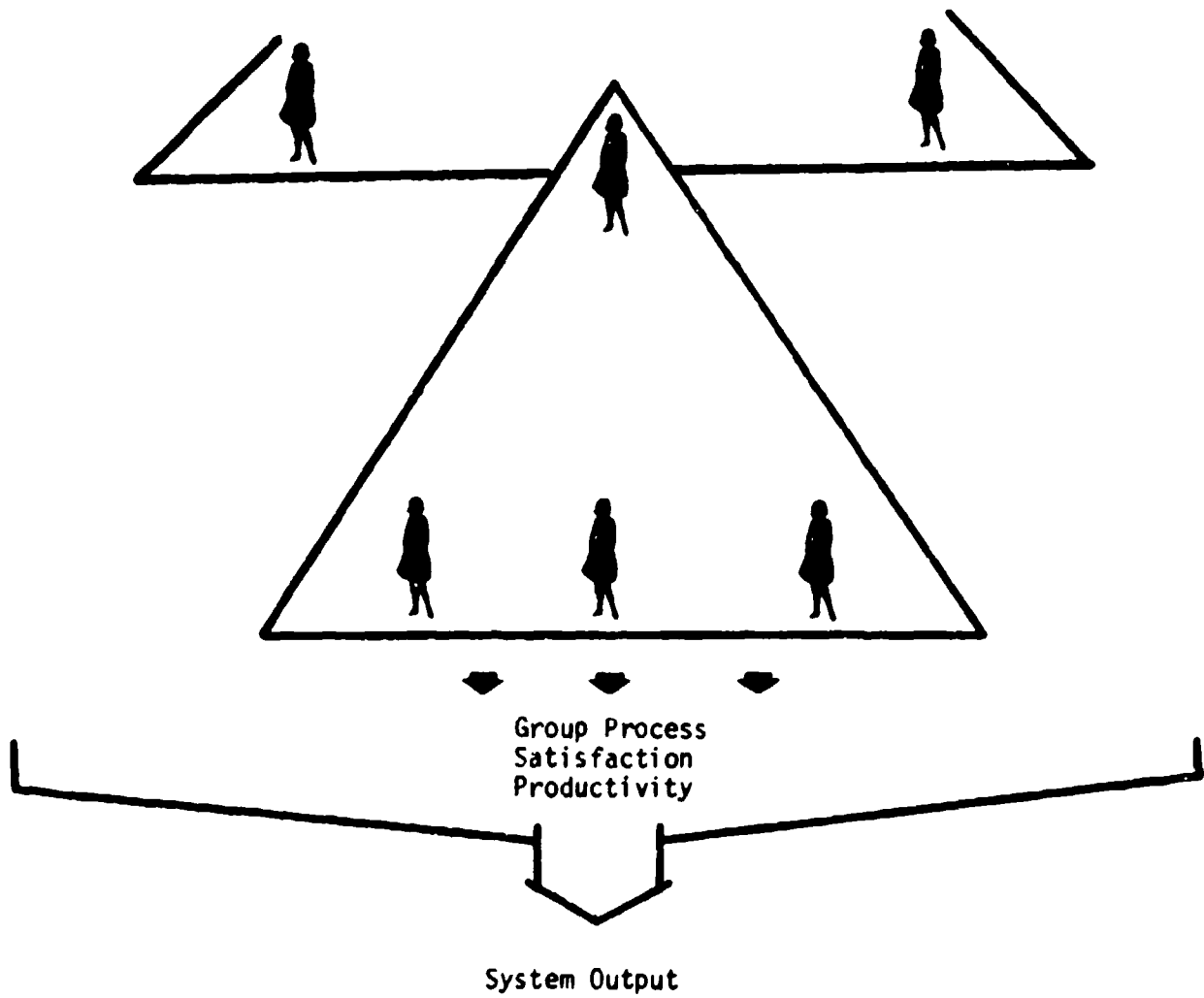
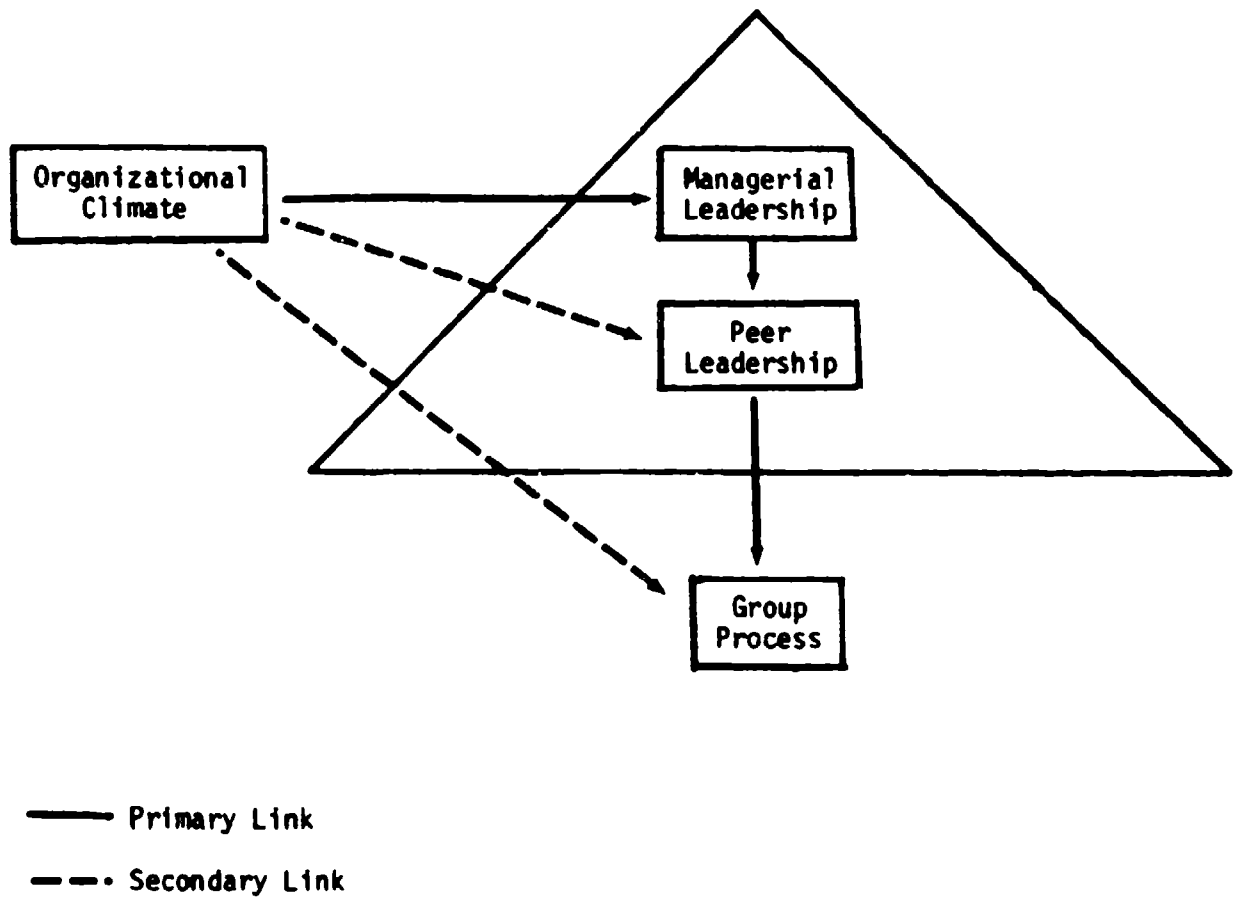


Figure 9  
RELATIONSHIPS AMONG  
SOCIAL-PSYCHOLOGICAL FACTORS OF WORK GROUPS



illustrates the relationships among the major social-psychological factors as they have been described by Likert and Bowers (1969, 1973), Bowers (1975), and in accordance with empirical support supplied by Taylor and Bowers (1972) and Franklin (1975b). In this figure the causal ordering of factors is illustrated by the direction of the arrows, and the relative predictive strength of each factor on the remaining factors is indicated by solid (primary relationship) or broken (secondary relationship) lines. Thus, the primary causal linkages are from organizational climate to managerial leadership, from managerial leadership to peer leadership, and from peer leadership to the group process factor.

Secondary linkages (i.e., those of lesser predictive strength) have been found to exist between the organizational climate factor and both the peer leadership and group process factors. In fact, the only possible direct causal linkage that does not exist is between the managerial leadership and group process factors. This absence of linkage together with the relationships that do exist indicate that the influence of supervisors on the elements included in the group process factor comes primarily as a result of the supervisor's ability to shape the leadership behaviors among group subordinates.

The above discussion indicates the overriding importance attributed to the organizational climate factor in this model. Not only does it serve as the primary causal factor for the chain of social-psychological occurrences for each work group, but it also has a direct causal link with each of the three remaining major factors. It was previously indicated that organizational climate is a result of the social-psychological processes from upper level groups in the organization. The result of

these processes form the products or outputs of higher level groups and are experienced by members of lower level groups as aspects of climate. The nature of this relationship is illustrated in Figure 10. As the figure indicates, the primary causal link from the upper to lower level group occurs between the group process factor at the upper level and organizational climate at the lower level (Franklin, 1975a).

Because organizational climate is so pervasive in its influence on other factors, it tends to accumulate and become more constraining at successively lower levels of the organization. Thus, leadership and group behaviors within lower level groups are more constrained (i.e., determined by the effects of organizational climate) than within higher level groups. The degree of relative constraint together with an indication of the other aspects of organizational functioning are illustrated in Figure 11. As demonstrated by this figure, it is the accumulated effects of the major factors presented in this chapter which result in the output of the system.

An important element of the relationships among the various social-psychological factors is the amount of time differential between changes in one factor and subsequent effects in a second factor. Although detailed information is not yet available to specify such periods with great accuracy, evidence exists suggesting that the lag periods between such changes for factors within a group are less than a year while the period between changes at one hierarchical level in the group process factor and subsequent alterations in perceptions at a hierarchically related level for the organizational climate factor exceeds a year (Franklin, 1975a, 1975b).

Figure 10

RELATIONSHIPS AMONG SOCIAL-PSYCHOLOGICAL FACTORS  
OF WORK GROUPS IN RELATED LEVELS OF HIERARCHY

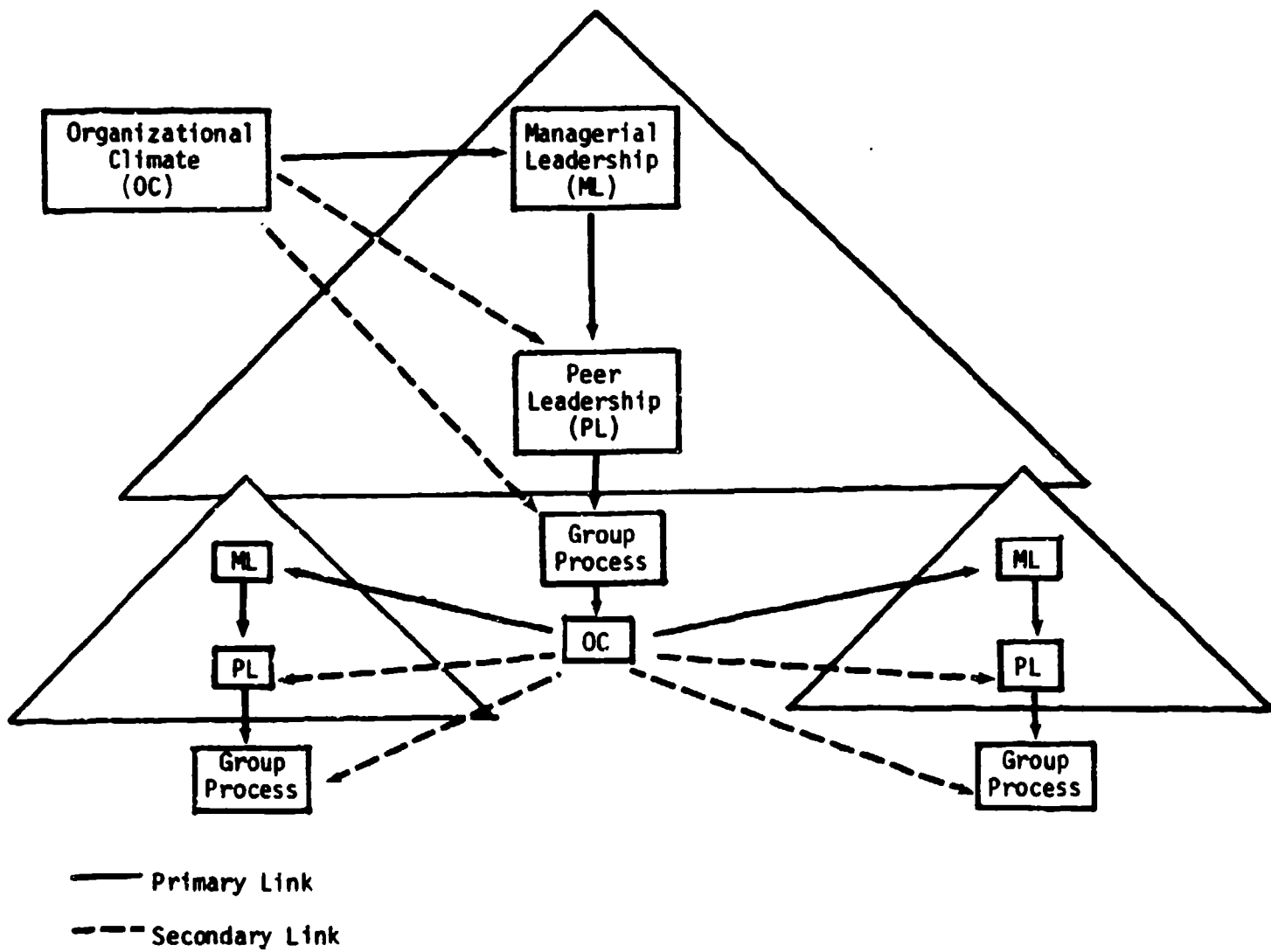
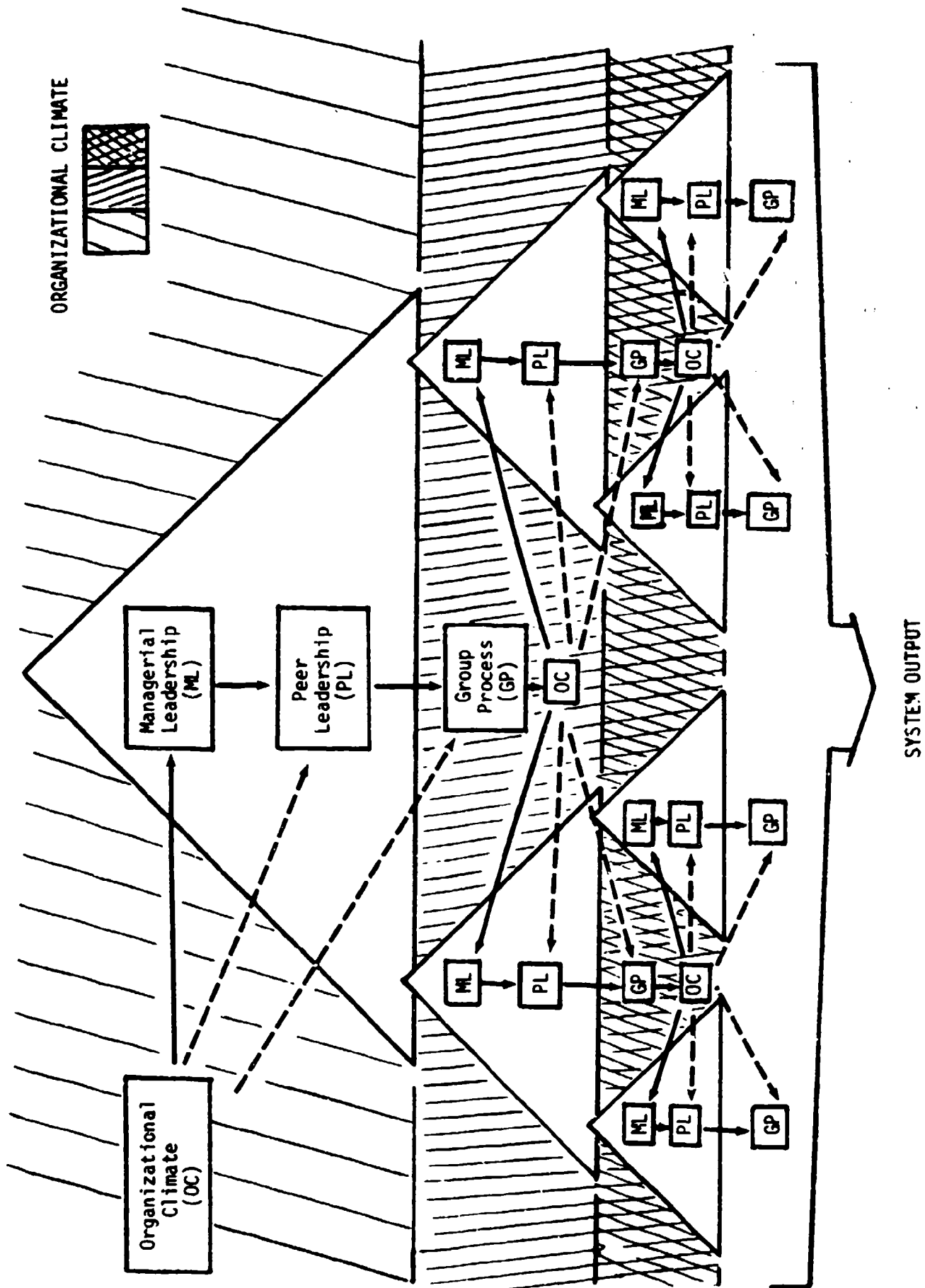


Figure 11  
ORGANIZATIONAL FUNCTIONING



An understanding of the relationships among these major social-psychological factors within organizations provides a powerful basis for tracing streams of events throughout systems. Ultimately, an efficient diagnosis relies on this ability to identify not only problems, but the sources of problems. The matching of problem sources with appropriate interventions and an appropriate sequencing of interventions is a key element in successful organizational development.

#### Comprehensiveness - Some Evidence

How comprehensive is the theory's coverage of the domain which it thus purports to represent? The question is, of course, incapable of being answered definitively. No clear identification exists of the domain, its boundaries, and its content as differentiated from other content areas. Also, no recognized, accepted measurement method exists to be used in assessing it.

A crude approximation can be made, however, by some method such as the following:

- (1) Take a volume of Psychological Abstracts and retrieve from its subjects index all terms conceivably relevant to the field of social-organizational psychology.
- (2) Eliminate from this list those terms which do not also appear in some standard resource for the organizational area (such as the Handbook of Organizations).

- (3) Compare the resulting list with the index of the present theory's basic source books and calculate the percentage of terms thus appearing.

This, in fact, was done. For each of the two original source books, two-thirds (66 per cent) of the terms so identified appear. As expected, the bulk of these consist of terms like "leadership," "problem-solving," "group," "motivation," etc. Those in the remaining (missing) third consist of terms from individual psychology (e.g., self-actualization, alienation), from engineering psychology (information, task), and sociology (role, norm, status, etc.). For the purposes which it sets out to attain, therefore, one may reasonably conclude that the theory and the model which represents it are sufficiently comprehensive.

Turning to other criteria, one may note that a model's validity and scope in a certain sense go hand in hand. That is, one aspect of a model's fidelity to real world situations is the amount, breadth, and quality of empirical evidence which has gone into its formulation. At the same time, these characteristics determine its generalizeability--that is, the number and variety of situations to which one may safely assume that it applies.

At one time or another during the thirty years that the model employed in the present work has been building, data have been obtained from over 200 separate organizations (i.e., geographically distinct, functionally relatively autonomous complex units) in more than 75 major organizational entities (companies, major divisions of companies, or major government agencies). The kinds of operations represented in this aggregation of data are shown in Table 1.



Table 1

Types of Organizations Studied in Generating  
and Refining the Model

adult education  
aluminum extrusion  
automobile manufacturing  
automobile sales  
armed forces  
banking  
building materials manufacturing  
chemicals production  
clerical services  
consumer products manufacturing  
consumer products research laboratories  
consumer products sales  
container manufacturing  
electronic equipment manufacturing  
foundries  
glass production  
glass products manufacturing  
government agencies  
heavy equipment manufacturing  
insurance clerical operations  
insurance sales  
juvenile court  
library  
newspapers  
oil refineries  
packaging materials manufacturing  
paper mills  
parcel delivery services  
prosthetic appliance manufacturing  
public utilities  
railroad  
rubber products manufacturing  
security sales

Emphasis has therefore been placed upon adult work settings, in both private industry and government. Comparatively little attention has been paid to, or evidence obtained from, voluntary organizations (churches, fraternal organizations, unions, etc.), political organizations, elementary and secondary schools, community organizations, correctional institutions, local government organizations, or small business firms.

Thus it seems reasonable to conclude that the model which this present work proposes and follows is applicable to most large work organization settings, covers fairly comprehensively the domain of organizational variables from a social-psychological point of view, and is backed by a substantial volume of empirical data. Furthermore, its predictions seem quite unequivocal, and they have in fact formed the basis for empirical investigations of the adequacy of both the model and instruments designed to measure its constructs (Franklin, 1973; Taylor & Bowers, 1972).

## Chapter 3

### The Nature of Change

Change is inevitable in any organization. It is, in fact, change which is the "normal" state of affairs. In saying this, we are not proposing that change for its own sake is a good and desirable thing. Instead, the meaning of the statement is that, for an organization to survive and be effective, it must change in response to changing cues in the world in which it lives, a process which is termed adaptation. The firm whose product demand has evaporated or greatly diminished must alter its own activities in some fashion or ultimately perish. For example, the small company which some years ago specialized in household deliveries of coal and ice must, by the present time, have switched to the sale and installation of gas and oil furnaces, the distribution of fuel oil, or the sale and servicing of refrigeration and air conditioning equipment or have disappeared from the scene. To have persisted, even if survival were possible, would condemn it in this day and age to a marginal existence.

Yet organizations have attempted to persist, altering nothing (except perhaps prices and services rendered) to a point of crisis, distress, and bankruptcy. Local transportation companies may be viewed, all too often, in this context. Faced with fundamental changes since the mid-1940's in the residential and transportation-need patterns of a sprawling population, they have usually maintained earlier courses and practices, attempting to cope with declining revenues by the twin self-destructors of raising fares and cutting service.

Thus the issue becomes not one of change versus non-change, but of necessary adaptation in response to changing requirements. When changing requirement cues are not received, the need for adaptation will go unrecognized, yet the system may be viewed as basically healthy (if misguided). When such cues are received, and behavior which does not meet the need persists, one must suspect some more fundamental ailment. The problem appears not dissimilar from that which occurs in clinical settings. Discussing neurotic behaviors among individual patients, Kubie has stated:

Not one of these acts is in and of itself inherently abnormal. As long as it can change freely in response to changing external or internal cues, it remains normal. It is the loss of freedom to change which marks the onset of the neurotic process (Kubie, 1966).

Organizations, like persons, are ordinarily open, rather than closed, systems. A disturbed individual is more nearly closed than a normal one. If organizations were nothing more than simple, face-to-face groups or single individuals, the discussion might well end with the points already made. They are not, however; they are, instead, complex hierarchical entities, and the very point at which the process begins contains within it a number of complexities related to this fact. It is to these points that the next section turns its attention.

#### Some Basic Concepts of Input in Organizational Adaptation

Change is movement, and the very nature of this concept requires that one begin with its antithesis, the steady (or homeostatic) state. Change is therefore, some form of interruption of a pre-existing steady state. Perhaps the clearest descriptions of what is involved in the change process come from the literature of pathology, where an interruption of a

steady state (a change) is termed a "lesion." The occurrence of a lesion requires the coincidence of two sets of factors:

- Factors of Realization - usually extrinsic occurrences which bring about the event in time, as for example the occurrence of radiation or trauma, or surgery;
- Factors of Determination - usually intrinsic conditions which are necessary for the event to occur at all, as for example the structure or properties of a cell.

Implicit in these notions is the proposition that both sets of factors are present and must in some way "match;" otherwise change will not occur. A simple medical example may illustrate this perhaps obvious point: an antibiotic drug, as a factor of realization, will produce a variety of different effects, depending upon whether the patient has (a) an infection, (b) a common cold, (c) no illness at all, or (d) an allergy to that drug. In the first instance it will likely help him; in the second and third cases it will have little or no effect, and in the final instance it may send him into anaphylactic shock.

Analogyzing to the problem of organizational change and development, this implies that the change process is in all likelihood multiplex, with outcomes determined by the interaction of treatment with the condition and its etiology.

From this brief discussion we may derive what would appear to be a fundamental principle of organizational change, which we may arbitrarily label the Principle of Congruence:

For constructive change to occur, there must exist an appropriate correspondence of the treatment (action, intervention) with the internal structural and functional

conditions of the entity for which change is intended. Since by definition these internal conditions pre-exist, this means that treatments must be selected, designed, and varied to fit the properties of the client entity.

Implicit in the notion of factors of determination is yet another proposition. Pathology literature states that change is most likely to occur at what is termed "sites of predilection," which ordinarily consist of points where two or more surfaces meet. The resemblance of this precept to a similar statement made by many writers in the area of organizational change is uncanny. Leavitt (1965), and many others as well, talk about "entry points." Lippitt, Watson, and Westley (1958) discuss "leverage points," which may be either some strategically located unit or some functional aspect of the organization from which change may proceed to other areas. Katz & Kahn (1966), in their chapter on organizational change, similarly seem to see change as originating (a) where the system meets its inputters, (b) where system meets supersystem, (c) where echelon meets echelon. Thus general agreement is rather apparent with what we might term the Principle of Predisposition:

There are certain points in organizational space where change will enjoy its greatest likelihood of success; these points are, at least in terms of the change strategy, boundary points, and change starts at that boundary and works "in."

Finally, a third proposition may be extracted by considering simultaneously the ideas of several writers and disciplines. Leavitt has distinguished between primary targets of change (those characteristics immediately impinged upon) and ultimate targets (those characteristics which are sometimes changed indirectly, through change in primary targets).

From pathology come the notions of cardinality--that there are main or major processes on which other things depend, and order--that things lead to other things. Lippitt, Watson & Westley discuss "linkage," the idea that there must be at least a possible line of change progress from the leverage point to the change objective. The Principle of Succession is an implication of all of these views:

Change is accomplished indirectly, not directly, by a process in which the intervenor changes some things in order to change other things, only ultimately arriving at the true target.

Several points emerge from all of these various conceptual statements and primitive principles. First, responsible change practice requires that one must be able to say that a particular treatment produces the condition which it is intended to produce. Yet it seems obvious that change design is not a simple matter of treatment selection--a choice of treatments whose impact is uniform whenever used. It is instead one of interaction between the treatment and multidimensional conditions within the organization. Stated more simply, a particular intervention behavior or action is one thing under one set of organizational conditions and a completely different thing under others. The point of all this is that the change agent or designer may delude himself into believing that, by using a single intervention or treatment, he has in some sense "controlled" for extraneous factors by conducting one specific set of activities, when, in fact, he has done precisely the opposite.

Second, one never changes "it" (the condition which one proposes ultimately to affect); instead, one changes things (makes inputs of a kind) presumed to lead to "it." Thus we provide information, conduct

skill-building sessions, or alter the situation because we believe that this is likely to change the behavior of the persons involved. In no instance do we--nor can we--"change their behavior" directly. Only the persons themselves are capable of that. At first blush this may appear to be elucidating the obvious, yet it seems that this point is often overlooked. We do what we do because of assumptions that we make about the connection between the changed conditions which we provide and the behavior of the organizational member experiencing them, and our assumptions often seem to be fuzzy, incomplete and unrecognized, if not downright unjustifiable.

The problem of change in organizations, therefore, involves simultaneous consideration, and then appropriate sequencing across many persons, roles, and settings of three important aspects and their potential interactions:

- (1) the behavior(s) which are problematic;
- (2) the conditions which create those behavior(s) and,
- (3) the nature of possible treatments.

In more nearly operational terms, these three aspects assume the form of three relatively simple questions: What is the behavior which seems to be deficient? Why does that behavior exist at its present level or in its present form? Which of a large number of possible interventions would be most likely to correct the deficiency?

Yet most active organizational development efforts take into account one, or at most two, of these dimensions. Problems may be differentiated, but their root causes undifferentiated, and the treatment (intervention)



always the same. Or problems may not be differentiated, but treatments may vary with the assignment or current preferences of change agents. Less commonly, a two-dimensional strategy may be employed, in which problem behaviors are differentially matched to treatments, but without regard to the different conditions which may cause the observed behavior problems.

The appropriateness of either one-or two-dimensional approaches to organizational development rests upon the acceptance of either of two assumptions:

- (1) Problem behaviors are always caused by the same conditions; or
- (2) The conditions creating problem behaviors are not critically related to the choice of intervention techniques. Stated more generally, (a) as a factor of realization, the treatment is universally relevant to all or many factors of determination; or (b) factors of determination are universally present, or nearly so.

Neither of these assumptions appears to be warranted. In the next section we turn our attention to a limited number of categories of conditions which may, in any instance, cause problem behaviors.

#### Precursors to Problem Behavior

As stated, a critical skill in organizational development is that of obtaining a good picture of what an organization is like, including the problems of its component parts and how they are interrelated. We propose that there are four factors which largely determine the behaviors of

individuals in organizational settings. The factors include (1) information, (2) skills, (3) values, and (4) the situation in which individuals and groups exist.

The first three of these factors can be evaluated in terms of each individual organizational member. The situation is a more general factor associated with groups and major sub-units of organizations. Each factor can be viewed as a precursor of organizational functioning; that is, the presence, absence and quality of each factor influences the functioning of the organization. These precursors determine the extent and type of problems which occur in the organization's processes and the variations occurring in organizational outputs.

#### Information

Individuals base their actions in part upon the information--including perceptions and expectations--they have acquired over time regarding what is effective or appropriate behavior. Information regarding both technological and social aspects of organizational functioning is crucial. Insufficient or erroneous information about the technical aspects of the work situation results in misused and damaged equipment as well as accidents and low levels of productive efficiency. Similarly, inadequate information regarding social aspects of work situations results in wasted or damaged human resources.

Erroneous models of organizational functioning based upon incomplete or mistaken notions about the number and nature of variables critical to understanding the social system of organizations, together with a lack of understanding of the complexities involved in the interactions between

these variables, can lead to widespread and severe negative consequences for the organization. A rather typical problem of this type stems from the short-range time frames used by many persons in evaluating the effectiveness of various behaviors. Many problems seem to result from notions regarding motivation based on short-term evaluations without regard for the long-range consequences. Thus, it is common to find managers who strongly believe that high production can be consistently attained through the constant applications of threats and pressure even though evaluations of such behaviors suggest that they become ineffective and quite costly to the organization after relatively short periods of organizational life (Likert & Seashore, 1963).

### Skills

Individual skills related to behavior in organizational settings also exist in both technical and social (i.e., interpersonal) areas. Thus, one may speak of an individual's ability to operate a piece of machinery or design an accounting system as being technical skills. Important social skills include those that influence the way in which organizational members interact. These often are referred to as "leadership" and "group process" skills.

The facts that technical and social skills are distinct and that social skills are vital to organizational success seem to be frequently ignored. A common assumption made by many persons seems to be that technical skills are more vital to accomplishing organizational goals, while social skills are less important. This assumption leads to a relatively strong emphasis upon technical training in organizations compared with

training in the social aspects of work situations. A related assumption regarding these two skill areas is that while technical skills require special training, social skills can be generally "picked up" by nearly anyone who has technical competence.

Perhaps the clearest indication of this assumption is the practice of promoting individuals to managerial positions on the basis of their demonstrated technical abilities. The fact that such changes are often made with little more than cursory training in management concepts--often including only an exposure to the organization's official managerial policies--in part reflects the notions that the social skills required of managers are not terribly important and are adequately acquired through minimal training and by performing in a managerial position.

A contradictory but equally common assumption is that social skills are untrainable. Accordingly, one is either born with appropriate interpersonal competences or acquires them very early in life, after which they cannot be significantly altered.

The experiences, observations and research of the present authors and others suggest that these assumptions regarding the relative unimportance of social skills in organizations, the ease in attaining those skills, and assumptions that skills are untrainable are all ill-founded. The importance of social skills to organizational performance has been widely observed and is described in various formal theories (Likert, 1961, 1967; Argyris, 1962; Katz & Kahn, 1966; Blake and Mouton, 1964). The importance of such factors has also been demonstrated through analyses of the relationship between social psychological aspects of organizational functioning and organizational output variables (Taylor & Bowers, 1972).

In addition to evidence supporting the importance of social factors, there are reasons to believe that social skills are becoming and will continue to become increasingly more important to the success of organizations as they become both more oriented toward service functions and more technologically advanced. With regard to the latter dimension, Taylor (1971b) presents data suggesting that to be effective, organizations becoming more technologically sophisticated also come to require the presence of members with more highly developed social skills.

### Values

Every individual carries with him a set of values (i.e., estimations of desirability, importance, usefulness, etc.) which influence behavior. These values are related to many areas and are of varied intensities. In general, one might think of the range of intensity beginning with rather superficial opinions which are relatively unimportant to the individual, to beliefs which are more important, and finally to basic values central to the individual's self-concept and behavior. When an individual's basic values foster behavior incongruent with effective organizational functioning, the consequences for the organization are likely to be detrimental. An extreme example of such a situation would be a manager whose values hold that people are relatively unimportant, expendable resources in organizations, compared to the physical plant and equipment. The behavior of such an individual could prove to be extremely costly to the organization in terms of wasting valuable human resources through turnover, lack of motivation, accidents, and psychologically triggered physical illness.

### Situation

Behavior of any individual member of an organization depends in part upon other individuals and groups. Behavior is also not independent of the physical setting and technological requirements of the job. As was the case in our consideration of information and skills, we find that the situation can be evaluated in terms of both technical and social aspects.

Examples of how technology and structure influence behavior are easily identified. Machines and standardized procedures (e.g., accounting systems, etc.) generally call for behaviors which are fairly limited. Their design dictates which behaviors are to be exhibited and in what order. For example, a punch operator must follow approximately the following steps in order to accomplish his task: (1) obtain a piece of unpunched material; (2) place the material in the machinery; (3) clear his body from the machine--sometimes with the aid of the machine which actually pulls parts of his body away from danger; (4) operate a control to punch the material; and (5) remove the material from the machine. The degree of standardization called for by such tasks often leads one to question whether the operator controls the machine or the machine controls the operator. In fact there is an interaction between man and machine which makes both interpretations true to some degree.

Like technology, the structure of the organization has tremendous influence over individual and group behaviors within an organization. Structure greatly determines the patterns of work-related and purely social relationships found in organizations. Individuals of approximately the same states (i.e., those located at about the same level in the organizational

hierarchy) and those whose work dictates that they be in close physical proximity are more likely to interact more and in a more friendly fashion than are those of greatly disparate statuses or those experiencing great physical distance. Thus, we often encounter high degrees of comradery among members of the same group or department and some animosity and distrust between members of different groups or departments.

The following examples illustrate how the behavior of each organizational member is partially determined by the combined influences of the social psychological aspects of organizational life. A situation might exist in which a supervisor is greatly constrained in his leadership behaviors by the aspects of the organizational climate. If the organization's policies prohibit or strongly discourage the holding of group meetings this will have a profound and detrimental effect upon the supervisor's ability to facilitate interaction among his subordinates. Consequently, the subordinates will also be restricted in their ability to work together as a team. The result will be less effective functioning, based upon a lack of task-related interactions among members of the group.

Another example of the effects of the social psychological aspects of the situation on the behavior of organizational members can be imagined in terms of the standards of performance established by a supervisor. In a situation in which objectives are inherently unreasonable, unattainable, or unclear, a supervisor is greatly hindered in his ability to maintain high standards of performance. In such a situation he is often placed in a position of defending the objectives rather than one in which he would act as a facilitator to his subordinates in their attempts to attain the objectives.

Each of the four precursors influences the effectiveness of the individual's behavior. The most effective individuals are clearly those who have the information and skills necessary to complete the various tasks, values congruent with effective behavior, and a situation in which they are supported in their attempts to behave effectively. Although each of the precursors is important, the adequate presence and quality of different combinations of these four elements will have different consequences for the individual and the organization. For example, an individual who has information, skills and values congruent with effective functioning but who finds himself in a situation which severely restricts effective behavior and which he has no means of changing is likely to become quite frustrated. Such an individual is likely to withdraw (either psychologically or physically) from the organization. On the other hand, an individual who finds himself with information, values, and a situation adequate to the task, but who is lacking in needed skills which he has an opportunity to acquire, may seek the available training to acquire such skills.

The consequences for organizational effectiveness of the presence, absence and quality of the four precursors depends upon various factors including the number of precursors in which there are widespread inadequacies, and the level in the organizational hierarchy at which various deficiencies are encountered. Organizational functioning suffers most when deficiencies (a) involve more rather than fewer precursors, (b) influence the behaviors of large numbers of organizational members, and (c) occur at high levels in the organizational hierarchy.



### Development Techniques and Impingement Modes

This section is intended to provide descriptions of a variety of techniques currently applied in various settings to improve organizational functioning. The number and variety of the available techniques is impressive. They range from techniques focused upon relatively limited aspects of organizational functioning to techniques encompassing total organizations. The list presented herein is not suggested as exhaustive of all existing techniques nor are the techniques presented below necessarily exclusive of one another. This list is meant to provide descriptions representing the variety of activities which have received relatively high degrees of attention and acceptance among managers, consultants, and researchers concerned with methods of improving organizations.

We are able to classify the various techniques according to a framework similar to that used in describing the precursors to organizational functioning. The classification presented below separates the techniques into three major areas--information, skill, situation--according to which of these areas is impinged upon most directly and most immediately by the technique. Thus, techniques such as seminars, laboratory training, and survey-feedback are classified as information techniques even though they may eventually lead to changes in skills or situations. Similarly, job enrichment, organizational engineering and the Scanlon Plan are classified as situation techniques even though they may also lead to changes in skills or information.

It will be noted that values has not been included as a category used for classification in this section. This results from the judgment that values are not changed directly. Changes in values come only as a result of impingement upon one of the three other areas. Thus, some counseling and some forms of laboratory training that are often used to change values are classified under the information category since these techniques primarily impinge upon the individual's information. Acceptance of information may lead subsequently to changes in values.

Table 2 presents the various techniques classified in accordance with the primary impingement mode of each.

#### A Behavior Classification Scheme

As noted previously, descriptions of processes and states of organizations are simply shorthand descriptions for perceived constellations of the behavior of many individuals at various points in organizational space and time. The process of formulating these shorthand descriptions involves several steps. First, one must decide which behaviors to measure and how to measure them. This requires selecting some limited number of behaviors from the total universe and fitting these specific behaviors into more general categories. In a newly developing field, the decisions about which behaviors are selected and the categories in which they are placed are based to some extent upon what is suggested in existing theory and data in related areas of study; and to some extent on a priori notions about which behaviors are most important to measure. As more data are collected and as theories are developed, the behavioral categories (number and type) which emerge as most consistently useful in predicting specified outcomes are the behavioral categories consistently utilized. Once the

Table 2  
DEVELOPMENT TECHNIQUES

Impingement Mode	Development Technique
Information	Client-Centered Counseling Concepts Training Laboratory Training Management by Objectives Management Seminars (e.g., Kepner-Tregoe, Menniger Foundation) Managerial Grid Organizational Development Merger Laboratory Motivation Training Process Consultation Scientific Management Survey-Feedback Survey-Guided Development Team Development Third-Party Consultation
Skill	Behavior Therapy Imitative Learning Skill Training (e.g., problem-solving training)
Situation	Decentralization Differentiation/Integration Flow of Work Job Enrichment Leadership-Situation Engineering Operations Research Scanlon Plan Socio-Technical Fit Structural Change

behaviors have been measured, individual scores on the measures are averaged across people. From these average scores, conceptual categories emerge which describe the processes and states of organizational functioning.

Two things are different, then, when one talks about organizational processes and states as opposed to when one talks about the original behavior configurations occurring in an organization. When talking about organizational processes and states: (1) a limited number of behaviors are included, and (2) a higher level of abstraction is present.

These shorthand descriptions of organizational processes and states are useful for diagnostic and evaluative purposes. One can assess how an organization is functioning now (with reference to some ideal score on the measures), and whether major changes are taking place in an organization, by using the measures of the processes and states as benchmarks. The shorthand descriptions are also useful in providing a common language for talking about and studying organizations.

However, a major goal in the OD field is to improve organizational functioning--to make interventions (alternative inputs) which add positively to the ultimate output/input ratio of the organization. Pragmatically speaking, one cannot impinge directly upon a "process." Instead one must work with specific individuals and must be able to help these individuals change the original behaviors that created the ineffective processes. Since there are neither the resources nor the time to attempt to change any or all the original behaviors in some random order, it becomes paramount to identify some limited number of behaviors which, if changed, will cause changes in other behaviors. One should first change

the behaviors which will eventually cause the greatest positive change in the processes and states of the organization and thereby lead to the greatest improvement in output variables. It is important, then, to have an understanding of the causal flow of events in organizational functioning so that change efforts can concentrate on the problem areas, which if changed, are likely to produce the greatest improvement.

As an earlier chapter has indicated, we view leadership behavior to be a prime causal variable, determining the groups' processes and the system's output. According to this formulation, leadership is comprised of four categories of behavior: Support, Goal Emphasis, Work Facilitation, and Interaction Facilitation. The validity of this Four Factor theory of leadership depends on its comprehensiveness and its ability to predict the effectiveness of organizational functioning. A doctoral dissertation by Butterfield (1968) tested the adequacy of this theory and four other theories in these two respects, and the results will be briefly described here. The five theories studied were: Bowers & Seashores's Four Factor Theory; Mann's (1965) Skill Mix Theory; Katz & Kahn's (1966) Three patterns of leadership; Likert's System IV Theory; and Fiedler's (1967) Contingency Model. Data were gathered from four hundred people in an administrative unit of a federal agency in Washington, D.C.

When the intercorrelations were examined among leadership variables for the theories (excluding Fiedler's), five meaningful clusters emerged: support and work facilitation were two large clusters, and systemic perspective, goal emphasis, and group methods (including interaction facilitation) were three smaller clusters. The similarity of four of the

five clusters to Bowers & Seashore's four factors of leadership is obvious. It is noted that systemic perspective might be a useful addition to the theory. However, it is probably more salient at higher levels of organizations than at lower levels.

Correlations between leadership and effectiveness show success for all the theories, with the exception of Fiedler's Contingency Model. The highest correlations were found for the support and work facilitation clusters at the division level of the organization. The leadership variables were not as highly correlated with effectiveness of the lower levels of the organization. These lower correlations may have been due to the inappropriateness of the criteria for effectiveness at the lower levels. However, it is also possible that variables other than leadership are more highly related to effectiveness at the lower levels. For instance, task characteristics may become more salient for lower-level employees. The nature of the job may be more important at this level because jobs tend to become more routine as one moves down the organization. Perhaps for this reason, job design/enrichment programs have concentrated on low-level jobs.

There is evidence, then, that the Four Factor Theory of leadership is reasonably comprehensive, and is related to effectiveness. It cannot be said, however, that these four types of leadership behavior are the only behaviors influencing organizational functioning. Task characteristics and the corresponding behaviors are probably important--especially at lower levels of organizations.

While the exact nature of the influence of behaviors other than leadership on organizational processes must be explored and studied, the

causal nature of leadership behavior establishes a good starting point for classifying problem behaviors. That is, by changing ineffective leadership behaviors first, one can be quite certain that changes in basic organizational and group processes will improve, and that output variables will also improve.

### A 3-Dimensional Model of Organizational Development

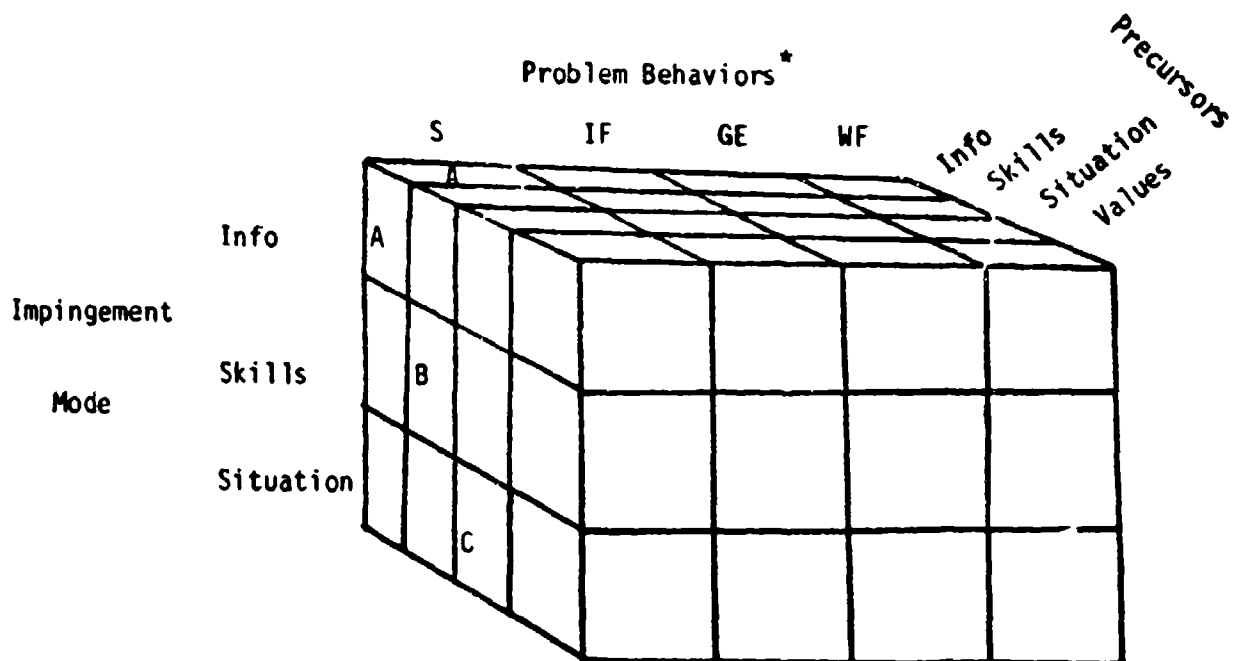
We propose that a three-dimensional (3-D) Model must be considered to facilitate effective organizational development. The proposed model considers three basic dimensions:

- (1) Problematic behaviors - defined herein in terms of four categories of leadership behaviors: support, interaction facilitation, goal emphasis, work facilitation.
- (2) Conditions causing these behaviors - described as the precursors: information, skill, situation, values.
- (3) The nature of possible treatments - the three categories of development techniques termed impingement modes: information, skills, situation.

Figure 12 presents a schematic representation of the 3-D model. This figure contains 48 cells ( $3 \times 4 \times 4$ ) each of which represents a different combination of the three basic dimensions. For example, the cell labeled "A" describes a problem in supportive behaviors resulting from inadequate information and rectifiable through informational inputs.

From the Principle of Congruence discussed above, we know that problem behaviors, precursors, and impingement modes need to be matched in some systematic way. However there are at least three possible, competing interpretations of the way in which this match should occur:

Figure 12  
Three-Dimensional Model




---

\* Support, Interaction Facilitation, Goal Emphasis, Work Facilitation



Interpretation 1: The impingement mode should always be congruent with the precursor (with the exception of values which would be changed indirectly by affecting one or more other precursors). This would suggest that:

<u>when the Precursor is:</u>	<u>the Impingement Mode should be:</u>
Information	Information
Skills	Skills
Situation	Situation
Values	

The match between precursor and impingement mode would not be affected by the specific nature of the problematic behaviors. For example, if members of the client system lack necessary information, the impingement mode should be information, regardless of whether the problem centers around support, interaction facilitation, goal emphasis, or work facilitation. However, the specific content of the intervention technique would be determined by the nature of the problematic behaviors. If the problematic behavior is lack of support by supervisors, the information presented, by whatever specific technique, would be information about the meaning, importance, and implications of supervisory support. It would be nonsensical to provide information about supervisory interaction facilitation, goal emphasis, and work facilitation except when this information would clarify the issues relevant to supervisory support. The "Problematic Behavior" dimension is essential, then for determining the content of a specific technique, once the appropriate precursor has been identified.

Interpretation 2: The impingement mode should be matched in some other way with the precursor. This would suggest that:

when the Precursor is:

Information  
Skills  
Situation  
Values

the Impingement Mode should be:

Skills or Situation  
Information or Situation  
Information or Skills  
Information, Skills, or Situation

Once again the match between precursor and impingement mode would not be affected by the nature of the problematic behaviors, but the content of the specific intervention would depend upon the nature of the problematic behaviors.

If either of the above interpretations is valid, whole rows in the Three-Dimensional Model (shown in Figure 12) would be useful or not useful for Organizational Development. If Interpretation 1 is valid, the rows labeled A, B, and C would be the only useful rows. If Interpretation 2 is valid, all rows except those labeled A, B, and C would be useful. Quite a different (and more complex) state of affairs would present us if the third interpretation, described below, is the case.

Interpretation 3: Precursor; Impingement Mode, and Problematic Behaviors must be matched in some specific way. If this interpretation is valid, organizational development would be a cell-specific (as opposed to a row) problem, with respect to the three dimensional model in Figure 12. There would be at least 48 different states with which we might be faced. The appropriate impingement mode would have to be matched with certain combinations of Precursors and Problematic Behaviors.

If this interpretation is valid, certain of the 48 possible cells would be useful or not useful.

In addition to the problem of determining which interpretation is most valid, there are several other issues to be resolved. The appropriate

impingement mode would depend upon whether more than one precursor and/or more than one category of problematic behaviors are present. That is, interactive effects are possible and the presence of interaction might change the appropriateness of one or more impingement modes. Certain problematic behaviors or precursors might be more easily affected than others. One impingement mode might always produce change more easily than the other two. Finally, one impingement mode might be applicable to one problematic behavior or precursor, or to several. These are all possible, and perhaps probable, given the complexity of organizational functioning.

The 3-D Model proposed here is equivalent to a "medical" model where the problem is described as the demonstrable symptom, the precursor is the cause of the disease, and the impingement mode is the nature of the treatment deemed appropriate. The model necessitates a differential diagnosis which describes the nature of the disease and its causes. The nature of the treatment must be based upon the diagnosis and must be administered at the correct time and in the correct dosage.

A criticism made by opponents of the "medical" model is that it does not actively involve the client in diagnosing the organization's problems and in generating remedies, and that because of this lack of involvement the client may systematically distort information he is asked to provide or reject the diagnosis and treatment suggested by the consultant. The underlying theme of this criticism is that the "medical" model is a patronizing one and does not create a trusting cooperative relationship between the client and the consultant. Carried to its absurd extreme-- where the consultant considers himself the know-all expert and the client system an organization in which the organization members lack the ability,

knowledge, and common sense to help describe and solve their problems-- the criticism is valid. However, any OD model carried to an extreme raises problems. The point to be made here is that in order for OD to be maximally effective, and in order for it to be tested empirically, OD must move in the direction of more detailed and intensive diagnoses and more exact choices of appropriate interventions. It must move toward being a more exact science and away from being a chaotic art.

### Integrating What Has Been Said

With the pieces all assembled, the time has come to summarize and integrate the whole. In this chapter, we have stated the following:

1. The normal, healthy state of affairs in any organization consists of adaptive response to changing environmental cues.
2. Adaptation, or change, itself consists of the interruption of a pre-existing homeostatic (or steady) state consisting of behaviors plus their causes (precursors).
3. The cues which originate in the environment are factors of realization and come in the form of:
  - a. changed signals from the organization's marketplace (signals which are, unfortunately, often far downstream in the sequence of organizational events and, though indicative, have a general character of being "too late").

- b. changed signals from the organization's supersystem (e.g., top corporate management), signals which are often injunctive but little else.
  - c. in an organizational development setting, inputs from the existing fund of knowledge about organizations, their development, and change--inputs which are often new and unfamiliar; the practice of organizational development consists of making these inputs understandable and utilizable.
4. For the cues to result in adaptation, an adequate model must exist and be accepted prior to their receipt.
  5. The motivation for change originates in the discrepancy which is perceived to exist between a desirable state of affairs (deduced as a goal from the model) and the actual state of affairs obtained in the form of a set of cues from an objective feedback process.
  6. As adaptive activities, intervention techniques must be congruent with both the form of the presently non-adaptive behavior and its causes (precursors). This is what we have labeled the "Principle of Congruence."
  7. There are boundary points in the organization where change is most likely to occur, because discrepancies are at those points more likely to be noticed and a source of some urgency. This has been termed the "Principle of Predisposition."

8. Because intervention activities impinge upon characteristics which in turn cause non-adaptive behavior, change is best thought of as an indirect, rather than a direct, process. This we have called the "Principles of Succession."

## Chapter 4

### Systemic Diagnosis

The cornerstone of survey-guided development is a diagnosis focusing upon social-psychological aspects of the organization. The information included in the diagnosis is gathered and analyzed within the framework or model describing throughput processes which affect the conversion of inputs to outputs. This heavy reliance on a model as a basis for diagnostic activities in an O.D. effort stands in marked contrast to the apparent norm in this field. Although much lip service has been devoted to the need for and importance of diagnostic efforts in O.D., Lorsch and Lawrence's (1969) observation that the primary emphasis has been devoted to the processes of change while minimal attention has been devoted to the development of models useful for organizational diagnosis prior to the initiation of change activities remains valid today.

The need for diagnostic information has received much attention from theoreticians and practitioners in this field. Several books and articles have described creative ways to gather data of potential value in diagnostic work. Yet, little has been said or written about suggested frameworks for organizing and interpreting information in ways that serve diagnostically useful purposes. In contrast, survey-guided development, as practiced by the present authors, is firmly based upon a framework which has been developed, refined, and empirically tested in many organizational settings over several years.

In survey-guided development diagnostic information serves several functions, but such an analysis of data first and foremost guides the selective matching of interventions with particular states of throughput processes to create constructive changes in the system. Diagnosis in O.D. can thus be likened to diagnosis in medicine or other fields. Such a use of diagnostic information is based on the assumption that particular interventions are more or less conducive to constructive change in specific settings at specific times. This is a clear rejection of the view holding that there is a single intervention or "best approach" to O.D. which seems to pervade much O.D. activity and leads to the common phenomenon of a new fad becoming the "in" treatment for a period of time until replaced by the next "treatment" of the moment.

The diagnosis forms a basis for the design of a rational change effort. Likert has stated this quite clearly in an early publication:

One approach that can be used to apply the findings of human relations research to your own operation can be described briefly. Your medical departments did not order all of your supervisors nor all of your employees to take penicillin when it became available, even though it is a very effective antibiotic. They have, however, administered it to many of your employees. But note the process of deciding when it should be administered. The individual was given certain tests and measurements obtained--temperature, blood analyses, etc. The results of these measurements were compared with known facts about diseases, infections, etc., and the penicillin was prescribed when the condition was one that was known or believed to be one that would respond to this antibiotic.

We believe the same approach should be used in dealing with the human problems of any organization. This suggests that human relations supervisory training programs should not automatically be prescribed for all supervisory and management personnel. Nor should other good remedies or methods for improvement be applied on a blanket basis to an entire organization hoping it will yield improved results (Likert, 1961).



One of the reasons for the importance of the diagnostic step early in the life of a change program is stated explicitly in the preceding quotation: it will increase the probability of focusing upon the right, not the wrong, problems, and it will add to the likelihood of the right, not the wrong, course of treatments being prescribed. A clear statement of the problems, courses of action, and change objectives, based upon sound measurements allied to the best possible conceptualization from research and theory, will maximize the likelihood that true causal conditions, rather than mere symptoms, will be dealt with.

#### Characteristics of System Diagnoses

To serve the purposes which its name, and its role, intends, a diagnosis should constitute an analysis of the current functional state of a particular system for purposes of determining appropriate treatments (action steps, or interventions). Both the name and this brief definition imply a number of characteristics which should be reflected in any methodologically sound diagnostic effort:

- (1) Theoretical Anchorage - A good diagnosis should look not merely at an arbitrary array of properties, but at an array of constructs which reflect an underlying scheme that is itself sensible, and which has been derived from the real world by a process of solid research. This framework serves to provide explanatory power by indicating how in general (that is, in most such organizations) various aspects of functioning should relate to one another. Without this, the problem becomes an assessment based upon a somewhat haphazard collection of readings.

- (2) Comprehensiveness - Since problems may originate and occur in any part or aspect of a system, any diagnostic effort worthy of the name should treat comprehensively the properties of the system as such; that is, it should not look selectively at a few aspects of system functioning, ignoring the rest. It should, instead, make as complete an effort as possible to assess the total functional state of the system.
- (3) Representativeness - In addition to covering the major properties of a system, a diagnosis should represent functional states as they exist in different sectors (functional areas or hierarchical levels) of the system.
- (4) Predictivity - The focus of a diagnosis should be events and conditions occurring early in the causal sequence describing system functioning. This suggests a minimal concentration upon system outputs.
- (5) Change Potential - Diagnoses of value in O.D. necessarily focus upon aspects of the system which are subject to influence--i.e., can be changed through the selection and application of appropriate interventions. Thus, inputs over which little control is possible are not appropriate areas for inclusion in diagnoses with action implications.
- (6) Precedence - Both its name and its role imply that diagnosis should precede and, in part at least, determine which particular treatment from an array of possible treatments should be used in the situation at hand.

- (7) Orientation - Diagnosis implies an orientation on the part of the consultant primarily toward the client system's well-being rather than simply toward his own.
- (8) Differential - Diagnosis implies that there are different states of nature which the employed assessment techniques distinguish from one another, and which ultimately have different action implications.

By way of contrast, there are several things that a diagnosis should not be. It should not be a simple benchmark against which to measure progress. Used in this way, diagnosis would amount to little more than an evaluation, since it would carry the implication that treatment is determined on some basis other than system assessment.

Similarly, a diagnosis should not be merely a "map of pitfalls" which permits the consultant to do what he always does anyway, but with minimum risk to himself and others. Using it as a map of pitfalls means that its role in determining treatment is denied. This use precludes as well, to some extent at least, a primary orientation toward the client system's well-being, and may even tend to negate the differential character which is so necessary for effective guidance of the treatment process.

Finally, differential diagnosis is not simply a matter of variety among consultants. Occasionally writers and practitioners cite the variety of things done by different consultants, or change agents, as evidence for the eclecticism present in the field, and infer from this that treatments are indeed differentially selected on a diagnostic basis. Levinson (1972) correctly describes the misleading nature of such a representation. The fact that different consultants employ different techniques says nothing

about the extent to which any one of them selects, from a wide array of disparate treatments, the one which is most appropriate given a solid diagnosis of a specific system's own functioning. The eclecticism, in other words, is not a matter of simple variety in methods and practices among consultants, each of whom may well be highly consistent in what he does from one situation to the next.

We thus arrive at a view that solid, rigorous diagnosis, based upon data that are representative and predictive, differential in character and comprehensive against a theoretical framework, is an essential step in determining which treatment to use for purposes of enhancing a particular client system's well-being. It is not a simple benchmark; it is not merely a map of pitfalls; nor is it a matter simply of pointing to the practice differences among consultants. Its usefulness depends upon the care which has been used in doing it, and it is to this issue that we now turn our attention.

### Elements of the Diagnostic Process

The diagnostic process involves three basic elements or phases beginning with data acquisition, continuing to data organization, and resulting in the evaluation or interpretation of the organized information. Each phase includes several possible alternative methods and procedures associated with particular desirable and undesirable characteristics. A brief description of the major elements together with an evaluation of alternative procedures will indicate why the survey-guided development approach places such strong reliance upon the standardized questionnaire as the basic measurement tool.

### Data Acquisition

Key facets of the data collection stage include (1) the form the data take, (2) the frequency of data gathering activities, and (3) the method used for data collection.

There are two basic forms of data available for diagnostic use. One is verbal (either oral or written) and the other is numeric (usually counts of the frequency of particular responses, but sometimes averages for particular measures such as productivity figures). Although it may appear that numeric data are more abstract and therefore less useful than verbal data, both actually are abstractions of reality and the degree of abstraction may be more related to the quality of the data than its form. It is true, however, that verbal information tends to be more "believable" and interesting to those individuals unfamiliar with or unaccustomed to the use of numeric data. Numeric data, on the other hand, are more easily recorded, aggregated, and stored than verbal information and, thus, is a more "economical" and, to some extent, a more useful form of information.

In the ideal, the frequency with which data are acquired differs with the content of the information and the stability of the system. The more stable the system and the specific area of focus, the less frequent is the need to gather data. At the other extreme, in systems which are in states of frequent fluctuation and for characteristics which often change, the need is for nearly constant readings. Since the latter situation probably describes most systems better than the more stable situation presented first, frequent readings are more desirable than infrequent readings. However, one obvious disadvantage of gathering information is the additional resources required each time data are collected. A strategy including frequent data acquisitions is therefore more costly than an approach requiring only an occasional collection of information.

The methods of collecting diagnostic data fall basically into two general classifications: (a) those which rely upon the diagnostician's collecting the perceptions of others, and (b) those which rely upon the diagnostician's own more or less direct perceptions. Within the first of these two categories (collecting the perceptions of others) two principal methods have widespread currency--the interview and the questionnaire. These two are not as different in theory as they may appear to be in practice. In the interview, one human being poses to others in verbal form a series of questions and records their responses. In form, then, it relies upon a human interviewer, and the questions are likely to be relatively open-ended (that is, calling for an expressed view which is recorded as nearly as possible in the respondent's own words). Interviews may be relatively unstructured, using highly general questions to trigger a response recorded verbatim in the respondents own words, or relatively structured, using questions and probes targeted toward specific pieces of information. The interviewer may, in fact, serve the function in highly structured interviews of simply reading a questionnaire to the respondent and marking responses. Depending upon the form of the response, data retrieved through interviews may be quantitative (e.g., the number of interviewees choosing each response alternative) or verbal (summaries of responses to open-ended questions). In most instances, however, information resulting from interviews takes the form of verbal summarizations of interviewees' responses.

The paper-and-pencil questionnaire is the second of the "indirect" methods of data acquisition. In this instance, the questions are usually highly structured, specified in advance, duplicated or printed in booklet form, and permit largely the selection of alternative responses from a list of predetermined possibilities. Data resulting from such collection procedures usually involve quantitative summaries of the number of individuals selecting each of the available response categories

The methods which rely upon the perceptions of the data collector encompass both observation and records retrieval, the latter perhaps a marginal member of this category. Observation may take the form of direct reading, or of indirect inference. Direct readings may be person-mediated; for example, an individual observer notes the activities, behaviors, or reactions of members of the client system during a particular period of time. The resulting data are subsequently used in diagnosis. In somewhat different form, observations may be instrument-mediated as, for example, when audio or video tapes are made of behavior or reaction segments in the client system, and these tapes are then submitted to a diagnostic analysis. In the more common form, however, information gathered through observational procedures is stored as descriptive statements or inferences provided by the observer.

In all of these direct observation instances, the purpose is to assess the functioning of the system by a procedure which records the contents of that functioning. Somewhat different from this is indirect inference, also based upon observation, which assumes some of the characteristics of projective techniques. In such an instance, the observer would record, not the substance of what was said or done, but the expressions used to say it or the manner in which it was done. Inferences can then be drawn regarding various functional characteristics, not from the direct observation

of their presence or absence, but from the words, terms, and manners by which the material had been related. For example, non-verbal cues, facial expressions, or posture during the interview might be noted; whether the interviewee attributed problems to themselves or others (perhaps regardless of their content), or blames factors outside the system might be seen as indicating defensiveness. The extent to which the interviewee uses evaluative or emotion-laden terms might be noted and seen as indicative of one or another functional state. The respondent's degree of consistency might be taken into account, and the like. Although the questions asked by the interviewer might be identical to questions asked in a direct reading situation, the material recorded would be far different and would reflect the respondent's manner of answering more than the substance of his answer (c.f., Alderfer, 1968).

Finally, diagnostic material may be retrieved directly from written documents (e.g., management policies and procedures, job descriptions, performance ratings, health records) and the operating records of the organization itself. Although most organizations do not maintain updated files of information directly concerned with the behavior of members and organizational processes such as decision-making, motivation, and the like, in many instances material appropriate to a diagnosis of these aspects of system functioning may be obtained from memoranda, policy statements, and the accounting and control records maintained by the organization. Although the material entered into such records has been, at one stage or another, perceived by a person other than the diagnostician, we class them here in the direct perception category because they comprise, in most instances, fundamental operating data which are then directly perceived by the diagnostician in the course of the diagnostic process.



Although a number of variations on these methods may exist--in fact, the number may be infinite--there would appear to be at least reasonable ground for concluding that each variation may be categorized into one or another of these general classifications. Still, the goodness of the methods is affected by a number of considerations not directly discernible from a consideration of methods themselves, and it is to these issues that our attention now turns.

### Issues and Problems

#### Cost and Complexity

In general, observational techniques are the most costly, followed by interviews, with questionnaires the least costly of the proposed techniques. Records retrieval is omitted from this comparison because the cost issues are determined in this instance largely by the issue of accessibility to which we will turn our attention shortly. Cost is, in this comparison, rather directly determined by the amount of "chaff" which must be sorted, covered, or sifted through to obtain a given amount of useable, relevant material. Since observation focuses its attention necessarily upon events as they occur, all events, both those relevant and those irrelevant, must be observed, although the latter may be discarded. The interview, on the other hand, focuses attention upon germane issues, at least to some extent, and hopefully by that process, eliminates much of the extraneous material while recording the useable and relevant. It is still more costly than the questionnaire, however, because for each word spoken, another person must consume time in the listening. The questionnaire, since

it does not require a one-to-one human relationship for its completion, and since it prespecifies the material to be collected rather closely, is certainly the least costly of the three.

#### Training and Skill Required

Diagnostic data are only as useful as they are reliable and valid, and the obtaining of reliable, valid data hinges largely upon the training and skill brought to bear in the collection process. When observational methods are employed, the observers must obviously be highly skilled and trained. If they observe the functioning situation directly, they must know how to record their observation, know the appropriate amount of detail to register, and know how to distinguish one event sequence from the next, that is, know when one activity has stopped and another has begun. They must know both how not to be distracted from relevant ongoing activity by peripheral stimuli, and at the same time, know which peripheral stimuli are in fact relevant to the process they are supposedly observing and which they wish to record. When the observation is instrument-mediated an additional entire array of technical difficulties are encountered which the subsequent observer-user must know how to handle and solve. Needless to say, indirect inference--the use of semi-projective techniques--requires a high degree of competence and an extensive background in the projection process itself.

Since the observer, in addition to all of these difficulties, is ordinarily an outsider, unfamiliar with the history of the unit whose functioning he is observing, and unaware of the double, hidden, and mutually understood meanings of particular phrases, behaviors,

actions, and cues, it is likely that his readings will be less reliable and less valid than those which would be provided by familiar "insiders." By standardizing the stimuli in the form of the questions posed to the interviewee, and by relying upon the interviewee's perceptions and interpretations of ongoing functioning, the face-to-face interview removes at least a part, if not most, of the principal sources of unreliability. To do this, however, requires carefully trained interviewers. It is not simply a matter of any person, with a reasonable degree of intelligence, traveling through the organization asking questions and noting responses. The problem of interviewer bias, as well as of interviewer-induced response bias, is simply too great for that. Yet, in many instances, O.D. practitioners rely upon informal interviewing as a source of diagnostic data oblivious to the pitfalls. The questionnaire, posing as it does the same question in the same form to all respondents and relying upon their familiarity over a period of time with events in the organization, goes the greatest distance, in our judgment, toward resolving the problems of reliability and validity.

Still, what each of these methods contributes in reliability and validity, it to some extent loses in flexibility. Clearly, since little if anything is prestructured, observation permits the greatest degree of flexibility in accounting for unique events in the setting. The interview, if it uses optional probe questions, may take at least some account of this. The structured questionnaire permits little, if any, of this, and its usefulness and validity in the larger sense rely upon the care and comprehensiveness which went into its construction at the outset. Administering questionnaires, of course, requires some training and acquired skill. In general, however, the degree

of training and skill required for questionnaire administration is less than that required for interviewing or observation. However, it should be noted that the amount of training and skill going into questionnaire construction is fully as great as the skill required in the other two methods. The difference is that, in the case of the questionnaire, this has been done "once for all." It need not be repeated in each data collection instance, provided that a common or standard instrument is used.

#### The Problem of N

A diagnosis is as good as the data upon which it is based. To be adequate the data must therefore reflect a fairly large number of specific instances of each situation. In the case of the questionnaire, and to a lesser degree the interview, the data collector (the questionnaire itself, or the interviewer) asks the respondent to summarize, in formulating his response, some appropriate number of occasions in which a particular type of activity has transpired. In the observational situation, however, the number of instances of a particular functional property which may be taken into account are those which have occurred during the time-frame of the observation. This is directly a function of the method itself, and means that a much longer, and therefore more costly, period of information recording must go on in order to encompass the same number of behavioral "cases."

### The Sampling of Events

To be accurate, diagnostic data must constitute a representative sample of the universe of behaviors or functional states which they are drawn to reflect. In the case of observational methods, the sample which occurs may reflect too limited a time period to make this possible, or the existence of the observer (the human being doing the observing or the instrument) may well itself distort the events which it is intended to monitor. The methods which rely upon the perceptions of the respondents themselves rely for the representativeness of their sampling upon the respondent's memory and willingness to encompass a sufficiently broad range. In any specific instance distortions may occur. Nevertheless, the array of events which may at least potentially be taken into account would seem to be larger than in the case of observation. Still it should be kept in mind that the demeanor of the interviewer, or the wording of the questionnaire items, as well as the content encompassed in phrasing the items or questions, may well serve to distort the sample.

### Accessibility Problems

All methods suffer to some extent from accessibility problems. Not all participants, nor all situations, may lend themselves to observation. Calendars and time schedules may make it difficult to interview all the necessary members, and potential respondents may absent themselves from questionnaire administration group sessions, or neglect to return distributed questionnaires. Accessibility becomes the largest issue, however, in relation to operating records, since in this instance one is ordinarily relying for his information upon

records and record keeping systems which were set up with purposes other than diagnosis in mind. Records may not exist, they may be tabulated or compiled in other forms, or they may in fact be considered confidential and denied to the diagnostician.

#### Time Lag as a Problem

Organizations are dynamic entities, and events move across them in time, creating waves or ripple effects in which a series of events at one time in one part of the system cause other events at other points in time in the same or other parts of the system. Thus, there is an issue to the extent that the data collection method used may not permit aggregation in the respondent's mind which is based upon his knowing precisely what the collected data are intended to represent. Today's events which are being observed, for example, may be the outcome of other events long since past. Operating records may reflect functional states which existed several years previously but which no longer remain. Solving this problem requires that diagnosticians not only know the nature of the constructs which are measured and their place in an appropriate cause-effect sequence, but also that they understand the relationship between the specific questions posed or items sought and that theoretical framework. Lacking these, there exists considerable risk of misreading the situation.

### The Method of Choice

Thus, each method has distinct advantages and disadvantages which vary somewhat with the type of information desired, the size of the system from which the data are to be gathered, and a variety of other factors. An evaluation of the positive and negative aspects of the potential data acquisition methods suggest that usual systemic diagnosis requirements, including minimal resource expenditure and accuracy of the information, tend to favor questionnaires as the preferred method for gathering data about throughput processes from large systems. When based upon a good model, carefully constructed and tested questionnaire instruments have the ability to provide more accurate information concerning a greater variety of indicators of throughput processes from more sections of the system in less time and with less expenditure of resources than do any of the alternative methods.

Of course, the use of one method of data acquisition does not eliminate the option of also using other methods. In fact, in survey-guided development efforts, data are often acquired through the use of both questionnaires and interviews. Interview data are gathered from a small sample of individuals selected to represent major functional divisions and hierarchical levels throughout the system. The interview data serve to supplement information from the questionnaires by providing a sense of the importance attributed to specific areas of interest and to indicate the specific forms of strengths and problems identified through the questionnaire data. Such interview results

also serve to provide an informal validation for questionnaire results. However, the necessities of thorough systemic diagnoses based upon valid information require a reliance on the questionnaire survey as the primary method for data acquisition in O.D.

### The Survey of Organizations

The instrument relied upon for the collection of diagnostic data in survey-guided development is the Survey of Organizations questionnaire. This is a standardized paper-and-pencil instrument designed specifically for use in studies of organizational functioning and in O.D. projects. It includes items primarily of a descriptive rather than a reactive nature focusing for the most part on aspects of the work setting, although some additional areas such as individual demographic characteristics are also covered. This instrument focuses extensively upon the throughput processes described in Chapter 2 and has been developed, tested, refined, and used in O.D. projects since 1966. Although the instrument has been "standardized" and widely used for several years, it has also been updated and revised frequently to reflect improvement in question wording and elaborations of its underlying model based on evidence from research on various aspects of organizational functioning. In its most recent edition, it contains 124 items comprising over 30 indices. The major areas of focus and indices are presented in Table 3.

Among the other advantages of the Survey of Organizations questionnaire are its theoretical base, coverage of the relevant domain, normative data based on extensive useage, and statistical properties (Taylor & Bowers, 1972).



Table 3

**MAJOR AREAS AND INDICES  
MEASURED BY THE SURVEY OF ORGANIZATIONS**

AREAS	INDICES
ORGANIZATIONAL CLIMATE	Decision Making Practices (4)* Communication Flow (3) Motivational Conditions (3) Human Resources Primacy (3) Lower Level Influence (2) Technological Readiness (2)
SUPERVISORY LEADERSHIP	Support (Actual & Ideal) (3,3) Team Building (Actual & Ideal) (2,2) Goal Emphasis (Actual & Ideal) (2,2) Work Facilitation (Actual & Ideal) (3,3)
PEER LEADERSHIP	Support (Actual & Ideal) (3,3) Team Building (Actual & Ideal) (3,3) Goal Emphasis (Actual & Ideal) (2,2) Work Facilitation (Actual & Ideal) (3,3)
SUPERVISORY NEEDS	Information (2) Values (2) Skills (2)
OTHERS	Group Process (7) Satisfaction (7) Job Challenge (Actual & Ideal) (3,3) Experienced Bureaucracy (3) Aversion to Bureaucracy (3) Goal Integration (2)

\* Figures in parentheses indicate the number of questionnaire items comprising each index.

### Data Organization

Once data have been collected, the need arises for organizing them such that they provide useable information to the diagnostician. The procedures required to organize large quantities of information can prove difficult and costly. Among other factors, effective data organization relies upon pre-knowledge of the reasons the data were gathered and uses for which they are being organized. This suggests a need to understand the areas of focus (i.e., key elements of the model), and means for evaluating the information prior to the establishment of data organization procedures.

Several concerns emerge regarding data organization for use in systemic diagnosis. First, the procedures must be designed to handle large quantities of data (i.e., data regarding many aspects of the system from a large number of sources). This requirement necessitates a primary reliance on numeric rather than verbal data. Responses from numerous respondents across many focal areas are relatively easy to organize when they can be summarized in numeric form. Organizing equally large quantities of verbal responses is a far more difficult and costly task.

A second concern is that data be efficiently stored and easily retrieved (i.e., rapidly accessible with minimal costs). This requirement also suggests a need for primary reliance on numeric rather than verbal data and further indicates the preferred mode of data storage would take advantage of computer technology.

A third concern is the ordering of data. There are essentially two alternatives. One is to combine all data together that focus on a particular content area regardless of the source of the data (e.g., individual, work group, etc.). The second involves the organization of data by source. The first strategy is preferable in those instances where the need is only for summary statistics on a particular focal area. However, the requirements of a systemic diagnosis calls for greater flexibility including the abilities to examine (a) patterns of responses across many areas from specified sources, (b) responses within specified sub-groupings, and (c) relationships among focal areas (e.g., among different throughput processes or between throughputs and outputs) within data sources. Thus, the preferred mode of data organization and storage for systemic diagnoses entails organization by the source.

The potential negative consequences of accumulating data in this fashion warrants considerable attention. One goal of data manipulation activities is the minimization of risk to sources. Since identification by source potentially involves great risk, the system should include procedures to provide safeguards minimizing the ability to identify data by specific sources. Two procedures are commonly used to ensure such protection. These are (1) using identification systems coded such that only a limited group of individuals responsible for data organization can identify the sources, and (2) reporting data aggregated such that it is impossible to identify the responses attributable to specific sources. These procedures can be used singly or in combination but, however these or other safeguards are employed, they are necessary to protect the identification of specific

sources and thus, minimize the potential for negative consequences and increase the motivation to provide accurate data. In fact, in survey-guided development, safeguards are employed such that no individual's responses can be retrieved. All data are reported only in aggregated form with the work group serving as the smallest possible level of identification. Further, data from a specific work group are the property of that group to be shared only by agreement of the supervisor or group members.

#### The Evaluation and Interpretation of Data--Forming and Presenting a Systemic Diagnosis

The usefulness of diagnostic data are not realized until they have been analyzed, integrated, and interpreted. Diagnoses involve making judgements concerning the "goodness" or "badness" of certain aspects of functioning, but they also include more than this. Important aspects of systemic diagnoses include the tracing of strengths and weaknesses throughout the system and the identification of the causes of these conditions. The success of diagnostic activities having corrective measures as the goal rests upon the ability to find the sources and causes of problems and to match appropriate corrective measures with specific problems and their causes. As the information in Chapter 3 indicates, the process of merging diagnostic information with prescriptive measures is complex in nature. In fact, a reflection on the current state of data useage suggests a relative void of diagnostic activities in the form proposed as most useful. For the most part, the identification of problem causes is left to speculation based upon informal, and largely untested, models held by system managers.

Several issues and problems associated with data evaluation and interpretation have a degree of importance equal to those identified in the data acquisition and organization phases of the diagnostic process. Further, many aspects of this phase seem less well understood and developed than those of the other phases. An identification of some of the more important issues together with a description of the issues as they surface within survey-guided development projects will serve to illustrate key facets of data evaluation and interpretation.

#### Expertise Versus Involvement

Persons are known to be more motivated by processes in which they are involved and more accepting of ideas they understand. At the same time, the diagnosis of an organization and its functional state is a complex skill necessitating a detailed knowledge of organizational theory and data. To some extent, therefore, the analytic, interpretive aspects of diagnosis pose a dilemma between a necessity for bringing to bear the expertise of the technically trained without sacrificing the motivated involvement of the participants themselves. It is a tightrope which requires a careful tread. Most especially, it requires that the expertise requisite for the process not be delivered in a fashion which antagonizes, becomes overbearing, or appears to denigrate the participants, their knowledge, and their importance.

In survey-guided development projects, motivation and acceptance are enhanced by providing system managers with an extensive prior understanding of the theoretical base upon which the data are based (i.e., the framework or model of organizational functioning) and through their involvement in

describing specific examples of behaviors and conditions indicated by the data and verbal summaries comprising the diagnosis. These conditions alter the dynamics usually present when diagnostic information (especially critical or negative information) are presented to those with responsibility for the state of affairs from one where the presenter's efforts are largely in defending the validity of the data and dealing with general resistance from the recipients, to a more productive interaction in which both the presenter and recipients work together to gain a better understanding of what the diagnosis offers in terms of guidance for improving organizational functioning.

#### The Use of Comparisons

Diagnostic data are of most value when they are compared to a standard. Standards may, of course, assume a variety of different forms. Perhaps the most common and simplest such standards are those implicit in the response categories of data collection procedures. Thus, on a multipoint scale rated by respondents, conditions may be judged as poor if they are rated at or near one end of the scale and good if they are rated toward the other end. There are several inadequacies in making judgments solely in this manner, including difficulties associated with the construction of alternatives which will produce predictable distributions or adequate variance across respondents.

A somewhat different approach includes the solicitation of judgments concerning "ideals" along with reports of actual conditions. Using this method, judgments can be determined through an examination of the discrepancies existing between "ideal" and "actual" ratings. A significant disadvantage of this approach emerges from the tendency for ideals to be modified or

to vary with the actual conditions. Thus, it is common to find that the size of the discrepancy is approximately equal regardless of the level of the rating. Even when changes occur in actual conditions, the differences between ideal and actual scores tend to vary together to retain approximate constancy.

A third alternative for comparative purposes is the use of norms in which the data from organizations or subparts typical of that being diagnosed are established as standards. Many types of such norms can be considered. For example, assuming unlimited access to data needed for such normative sets, norms can be established for organizations as total entities, those of different sizes, technologies, or functions, different levels of hierarchy, and a host of other variations. Each of these possible norm comparisons may be more or less useful depending upon the focus of the diagnostic effort.

Systemic diagnoses as used in survey-guided development, make extensive use of two major normative bases. These are norms for total organizations and norms for level splits--i.e., norms for different levels of hierarchy based on four level classifications and a white-collar/blue-collar distinction. These norms provide the necessary bases for evaluating the comparative effectiveness of organizational conditions, practices, and reactions for a total system compared with other systems and each level of hierarchy compared with equivalent factors in similar levels within other organizations. Lacking norms, one runs a real risk of classifying as "good" that which, in fact, is less than acceptable, and classifying as "bad" that which is really not so. In all instances where norms are used, however, one should recall that the norm is, at best, a description of the typical behavior of an entity like that currently being diagnosed; it does not reflect an ideal

nor even a necessarily desirable state. Even so, such norms are extremely valuable in providing realistic guides for making diagnostic assessments.

### Presenting Diagnostic Data

Diagnostic data obtain their usefulness when they are presented to persons with critical roles in the treatment or development process. In some instances, diagnostic data are digested only by the consultant or change agent himself and represent only his notes to himself, perhaps on tape, perhaps in memo form, perhaps simply retained in his memory. More often than not, however, as in the case of survey-guided development, the presentation of diagnostic data is made throughout the client system with which subsequent work is to be done. In such instances, the diagnostic data may be presented in written form (that is, in the form of a diagnostic report or "workup"), orally (that is, talked through with the client system or its key members), or by some combination of multi-media methods--perhaps a narrated report accompanied by a written summary, graphic displays, and the like. A number of issues arise in such instances.

A diagnosis which consumes several months in the construction may be elegant, yet useless, since much hinges upon the currency of the diagnosed situation. In general, the faster the diagnosis can be returned, the more relevant and urgent it will be to the client system and to its efforts to improve. No definite turnaround time guidelines can be given, but the diagnostic data should be available to coincide with needs dictated by the overall plan for a development effort. In the case of a survey-guided development project such data are required shortly after organizational members have received adequate preparation to understand and to effectively



utilize these data. Although the diagnosis may be available earlier, this point is usually not reached before a period of from six to eight weeks has elapsed from the date of data collection. Of course, the change agents may utilize these data in their planning activities prior to the time of its presentation to system managers.

### Complexity Versus Simplicity

There appears to be reasonable agreement among O.D. specialists that the diagnosis in its presentation to the client system must be kept simple enough to be readily understood by its members. Far from representing a patronizing stance, this represents a sensible commitment to minimize, or if possible eliminate, professional jargon, to avoid ambiguous wording, and to make the interpretive points which are presented as simple, clear, and straightforward as possible. Of course, the degree to which a diagnosis must be "toned down" for the recipients is related to the extent to which recipients have developed knowledge bases and skills required to handle complexities in diagnostic information. Thus, as system managers become better prepared to work with involved diagnostic information, they also become more receptive to and competent in using complex and meaningful diagnoses.

### Ordering of Information

Although information covering many facets of organizational functioning can be arranged in a large number of ways, logic suggests a rather limited range of possibilities for ordering diagnostic data. The most obvious arrangement is to order the diagnostic information in accordance with the sequence of causal patterns indicated by the underlying theory or model describing relationships among elements describing organizational functioning.

Thus, the factors are examined in accordance with the cause/effect sequences as defined by the model appearing in Chapter 2.

An ordering of data we have found useful includes the presentation of information beginning with that from the upper-most level of hierarchy and proceeding downward level by level until all levels have been evaluated. A perusal of the data within each level reveals major causal trends and characteristics within each level, and the process of moving down the organization provides a systematic means of identifying causal patterns between levels of hierarchy. An overall summarization at the conclusion of such a diagnostic report is useful for highlighting major trends which pervade the system.

#### Summary

In these pages we have reviewed a multitude of issues associated with the formulation and utilization of diagnostic information. It has been emphasized that a systemic diagnosis requires a comprehensive analysis of the current state of the system, an analysis which precedes, and in part determines, a treatment from a possible array of treatments. It must be differential, it must be oriented primarily toward the client system's well-being, and it ought not be a simple benchmark, a map of pitfalls for the change agent or consultant, nor a simple earmarking of the style differences among existing consultants.

Each of the major phases (i.e., data acquisition, data organization, evaluation or interpretation) of the diagnostic process requires careful consideration to assure the formation of a diagnosis which represents accurate readings of organizational functioning and is utilized to its fullest potential.

## Chapter 5

### The Role of the Change Agent

The thrust of what has been said thus far is that organizations are entities which exist in distinct environments, their survival and thriving dependent upon their ability to adapt to changing circumstances which come to exist in those environments. This adaptability--this flexibility, if you like--depends upon the existence of a number of factors. One of these is the availability of a measurement system capable of providing feedback, not just about final outcomes, but about the intermediate and causal events which combine to produce them. Another is the understanding and acceptance of a model which is adequate to the task of mid-course correction and with which the measurement-feedback procedure is congruent. A third is awareness of, and access to, some body of practices (treatments, interventions, development activities) which are capable of providing mid-course corrections.

If knowledge about these factors were as much a part of the management curriculum as similar aspects of, for example, electricity or metallurgy are of engineering curricula, organizations might adapt on their own with relative ease and success. Unfortunately, they are not, with the result that--for most managers and most organizations--this body of knowledge and practice is new, unfamiliar, and often difficult to understand. Perhaps for this reason, more than any other, a person with a highly specialized role is necessary to bridge the gap between the needed and the known. In the jargon of the profession, such a person is called a resource person, interventionist, or change agent.

Even a nodding acquaintance with the field is sufficient to make one aware that contemporary society has a great number of such persons who offer themselves for hire. Organizations buffeted by the pressures of today's world will find many persons--whole firms of them, in fact--only too eager to help them. Yet high fashion in organizational management produces effects not unlike those in any other area: not all that is offered is attractive upon closer scrutiny, functional, or even safe.

The literature is sparse. There are a modest number of anecdotal accounts, case studies of rare events in unusual settings, and the like. There are even a few humorous spoofs. But very little is available that could be termed solid, rigorous conceptualization, and even less that would qualify as real evidence on the subject.

Some thoughtful work does exist, however. Bennis (1965) points out that the normative posture of most change agents coincides with a paradigm in which heavy reliance is placed upon the use of the change agent himself as a role model. He differentiates this view from an applied research approach which uses research results systematically as part of the intervention, as, for example, in survey feedback strategies. He also examines the power base of the change agent and rejects reward, coercion, and legitimacy as feasible or desirable sources. Referent power, and a closely allied force--the coincidence of change agents' personal values with those humanistic values which he believes are held by top managers today--form the major basis, in Bennis' view, for the change agent's ability to influence events. Expertise is considered to be a possible, but unlikely, addendum to the change agent's influence base. Finally, he describes the process (and ultimately the change

agent's role) as one concerned with the "linkage between theory and practice, between knowledge and action," (p. 340) a linkage which he distinguishes from what is implicit in mar. recognizable change programs (such as human relations training or scholarly consultation). The latter he sees as too limited in concept and strategy, too wrapped up with the power of formal "knowledge."

Friedlander (1968), in one of the rare empirical studies (a field experiment) concluded that, "The underlying cause for the superiority of an integrated development program over a simple laboratory program seems to be the increased acquisition and utilization of knowledge by the consultant of the work group and its organizational context" (p. 377).

Beyond these, two pieces stand out as rather uniquely tied to the topic. Havelock (1973) casts the entire issue into a framework which has emerged from the study of processes by which scientific knowledge is utilized. He identifies three different views of utilization, and hence change: as a problem-solving process, as a classical research and development sequence, and as a social interaction process.

Viewed as a problem-solving process, the focus is largely, if not exclusively, upon the user or client himself and the satisfaction of his felt needs. Outside change agency is seen as appropriately non-directive, because to be otherwise would violate the user's integrity. Maximal reliance is placed upon the user's own resources, and self-application is viewed as motivationally best.

Seen as a classical research-development-diffusion process, change is viewed as a rational sequence surrounding a rather passive client-recipient. Specialization of labor and functions, a great deal of

planning, and high initial development costs are seen as justified by the enhanced efficiency and quality of ultimate results.

Treated as a social interaction process, change is seen as involving a user by and through the social networks to which he belongs. As such, calculated efforts take more often the form of network building, network utilization, and multiple-media approaches.

It seems obvious, and Havelock implies it, that much of what has been presented in practice and the literature as planned change and organizational development has been limited to consonance with the first of these views--change as a problem-solving process. Great emphasis is, in most orientations, placed upon the user system, its felt needs, its satisfaction, and its involvement in the effort. The change agent's role, although occasionally and subtly directive, is for the most part viewed as best when it is non-directive in character.

Very little of what comprises the research-and-development and social interaction views appears in the planned change literature. True, some elements of the rationality, high initial development costs, and functional specialization characteristic of the research and development view enter into what Bennis (1965) termed the applied research approach to change, perhaps best exemplified by survey feedback activities. For the most part, however, the predominate organizational development stream has avoided both this and the social interaction views.

Havelock advances the opinion that each of the three views contains legitimate and valuable points; each is in some measure incomplete. He proposes an integration of the three into a more adequate view of change as a linkage process. This begins with users' felt needs, but adds to

them the view that the user must be effectively linked to outside resources. These resource systems interact with the user system and with each other in reciprocal ways that involve resource systems' simulating user processes. From this comes a sequence of events which go beyond simple problem-solving to the creation of social influence networks (in our terms, social systems) which persist over time in problem-solution and problem-prevention. For the change agent, a variety of possible roles or role components are identified by such a conceptualization: diagnostician, prescriber, evaluator, system monitor, and process consultant, to name but a few.

In the second noteworthy piece, Tichy (1974) presents the results of a questionnaire survey of 91 well-known change agents. This study must certainly stand as a classic in a sparse field, both for the depth of its coverage and for its breadth. The author examined the general change model of the change agents in the sample, a model containing value (his goals, preferences, and beliefs about ideal change practices), cognitive (his conceptual roadmap), and change technology (his tools and skills) components.

The findings are rich, varied, and cannot be fully cited here. Important to our present discussion are the following general conclusions:

- (1) There is a fairly substantial socio-political loading in what change agents advocate;
- (2) Incongruity, rather than congruity, among values, actions, and cognitions is the most frequent state of affairs;
- (3) The organizational development change agent subset of their sample reported using a definite (and in some ways limited)

set of techniques. More than three-fourths of them relied upon sensitivity training, team development, and individual counseling;

- (4) The factor that is most responsible for maintaining incongruity is overadvocacy, the exaggerated promises and expectations put in place by the change agent in order to sell his program in a competitive, billion-dollar-plus consulting industry. Overadvocacy leads to an avoiding of evaluation, the non-clarification in advance of goals and assumptions, and little learning from feedback concerning success and failure.\*

#### The Change Agent as a Transducer

These pieces of conceptual and empirical work identify for us several critical aspects of the change agent's role. In functional terms, the change agent may most clearly be viewed as linking the organization to knowledge (information) which is, at the outset at least, present in resource systems which lie outside the organization, in its environment. The linking task is to scan the environment, locate markers bearing necessary and useful information, and bring those markers into the organization, in the process converting the information carried upon them to other matter-energy forms suitable for internal transmission.

The picture thus painted is not that of a catalytic agent whose purpose is merely to stimulate an effective interpersonal process, with the grist and capacity for development lying solely within the client

---

\* This point has been cast into decision-theory terms, with some rather interesting ramifications, by Bowers & Hausser (1974).



system itself. Instead, he is a transducer--an information link--between an outside source (the body of relevant knowledge) and the user system.

Taken together, these fundamental assumptions describe a change agent who will adopt an extensive stance, that is, who will view his task in systemic terms, treating the whole organization in all of its parts, rather than a small portion (e.g., at the very top of the power structure). He will rely upon more, rather than less, instrumentation, and will attempt to identify from a rigorous diagnosis the real needs of the various parts of the system, whether these needs are as yet felt by the client or not. In style, he will in most instances shy away from a purely non-directive stance. Cognition, in the form of a conceptual map of the domain clearly stated, validated, and accepted, assumes an early importance, although not to the exclusion of affective and experiential elements of knowledge. Throughout all of this, he sees himself as a link between a body of knowledge and a client system in potential need of its selective application.

#### The Transducer Role in System Adaptation

In an earlier chapter it was stated that organizational development may most appropriately be seen as a problem in system adaptation, a theme implicit and repeated in much of the material since. Survey-guided development clearly views it in this way and views the survey itself as providing a means by which multiple perceptions of behaviors and organizational conditions (the system properties, geared to the model) related to effectiveness can be gathered, compiled, and compared. In this connection, one must consider not one, but two, separate input streams from the survey. One of these input streams consists of the survey

feedback process itself, in which tabulations of the group's own data, especially concerning its internal functioning, is used as a spring-board to the identification, understanding, and solving of problems. The other consists of a more formal diagnosis, prepared by persons skilled in multivariate analysis, and focuses on those problem streams which occur in the system as a whole and which can be seen only by careful comparison of the tabulated data of many groups.

The change agent, as an adjunct person, seems to have no exact counterpart in manual control problems. The reason for his presence in organizational development is that a model of organizational functioning and human behavior is not as simple or programmable as that involved in manual control. Reading and digesting survey data are not the same as reading a gauge. Accomplishing an organizational "correction" is much more complicated than pushing a button or turning a wheel a certain number of degrees. In most instances the controller in organizational change--the client group--must be shown what the "gauge" says and how to read it, and must be guided through the operations of making the desired changes. The survey discrepancy, properly digested with the aid of the change agent, both builds the motivation to make the change and indicates what changes in functioning must occur. However, the change agent helps the client group learn how to make the necessary changes.

As a transducer, the change agent enters into both the diagnostic and therapeutic phases of the development effort. During the diagnostic phase, the model that the change agent presents must be reasonably complete, predictive, and adequate to provide the client with useful information. If the model lacks any of these characteristics, the change agent will be supplying the system with little more than noise.

In addition to having these characteristics, the model must be presented to the members of the group or organization accurately and adequately. The issue of acceptance is critical: the best model loses its value unless it is understood in useful ways by members of the system. The model and evidence in its support must be presented in such a manner that acceptance is based upon rational evaluation of the evidence as well as the experiences and insights of those involved in the organization. During this activity, the change agent must have the model clearly in mind, must be able to present the model and its evidence clearly, and must also be able to call upon his group process and related skills to facilitate understanding and acceptance.

As in any other situation in which the talents and knowledge of one man are to be made available to assist another, the manner in which that occurs is, of course, important. In the area of human organizational development, of all places, it is important that the knowledge be made available in a supportive, not a demeaning, fashion; it is not to be "laid on," ordered into place, or delivered as some form of speech from a pretentious throne. Skill in patient explanation, in aiding understanding, and in helping the client entities themselves to come to grips with reality--in short, the whole are extremely important. But the change agent must have the knowledge of what must be explained, the grasp of what must be understood, and the comprehension of what that reality is.

In this vein, the change agent facilitates the understanding and digesting of diagnostically useful information. In the survey-guided approach, this role involves helping members of the system to understand better the survey feedback information. It also may involve a range of

activities, from a detailed explanation of the meaning and relevance of certain content areas to helping group members understand information from the survey in terms of the here-and-now of the feedback meeting process. In addition, he aids the client group members in setting goals and formulating action plans for the development effort. In this activity, as in the others, the change agent may serve both as a source of information (e.g., suggesting potential actions to be undertaken or considered) and as a facilitator who focuses upon the group's processes.

The change agent also serves as a transducer in the therapeutic phase of survey-guided organizational development. Once a diagnosis has pointed to problem areas in organizational functioning, the change agent provides a link between scientific knowledge regarding effective methods of correcting specific problems and the problems exhibited in the immediate situation. A variety of activities may be undertaken during this phase. Each has, as its ultimate goal, movement toward the model of organizational functioning held (after its initial establishment) by both change agent and clients.

In part, the specific type of activity undertaken depends upon the stage in the therapeutic phase. In the early stages, the change agent is likely to be involved largely with supplying informational inputs regarding specific possible activities, helping organizational members cope with attitudinal shifts, and handling defensive reactions. The motivation to change created by a discrepancy between the ideal model and the actual state of the organization is alone not sufficient to produce change. Methods of actually accomplishing the change must also be evident to organizational members. In this respect, the change agent

in part fulfills his transducer role by informing members of the client system of the available alternatives.

In later stages, the change agent is often involved with skill acquisition and perfection by group members. The brand and variety of potentially necessary skills is large. Problem-solving, giving and receiving personal feedback, listening, general leadership, goal-setting, resolving conflict, and diagnosing group processes are but a few of those which might be cited. The change agent must not only know which skills are needed, but also must be competent in guiding their acquisition. It is as a result of this acquisition and perfection of skill that organizational members come to rely less on the change agent and more on themselves in movement toward the goal.

In addition to the emphasis on skills, the change agent provides and facilitates informal intermediate-phase feedback during the therapeutic phase. For example, he may provide the group with feedback in the form of process comments inserted during or after key intragroup interactions. He may also facilitate attempts by the members themselves to gather and understand information regarding their progress toward accepted goals.

#### Change Agency and Measurement

An effective approach to the problem of organizational change should be based upon solid information about how other, more effective organizations function, since it is from the distillation of information of this type that an appropriate, "true" model is derived. Information must also be collected about the nature of the organization to be changed, a procedure which (in relation to the results of the first) we call

"diagnosis." Diagnosing problems in the operation of an organization as a social system requires assessing the operations of all groups, at all levels, and studying the ways in which they relate to one another. In fact, the argument can be, and has been, made that the critical skill in organizational development is diagnosis, getting a good picture of what an organization is like, what its problems are, and how they are interrelated, rather than the therapeutic process itself (Bowers & Norman, 1969).

Taking a medical analogy from the armed forces, imagine that sick call in a particular unit was organized so that on Mondays everyone received antibiotics, on Tuesdays everyone received aspirin, and on Wednesdays everyone had a blood chemistry check. It would be obvious nonsense. Yet, when it comes to looking at organizations and trying to help them solve problems that they have, both company managements and many change agents trying to help them seem not at all averse to saying that everyone gets treatment "a," when in fact different sorts of situations and problems undoubtedly call for different kinds of applications and solutions.

Too often those responsible for development activities in organizations make an incorrect diagnosis or no diagnosis at all. Often they respond to current fads. For example, some other firm may have adopted a particular organizational development program that is widely marketed. It sounds interesting, it looks as if it might be appropriate, and so a company adopts it because it appears to be the thing to do. This is akin to taking your neighbor's medicine because he is a reputable person, or because you think the condition you have resembles the

condition he had. This sort of treatment swapping is as risky in organizations as it is in medicine.

Thus far we have tried to explain why the undertaking of organizational change is a complex process, not only involving the sensitivities and responses of the people in an organization, but also subject to the personal experience and biases of the change agents themselves. We believe that the planning of organizational innovation should be science-based. This means that planned development should not be undertaken without measurement that is precise, accurate, conceptually sound, and relevant.

The kinds of measurement needed to be applied to an organization involve the environment that each group has to work in, the behavior of managers and subordinates toward each other, the ways each group goes about accomplishing its missions, and their attitudes about outcomes. In this light, the proposition put forth by some change consultants that it doesn't really matter what is measured--as long as there is participant involvement in the process of measurement--just cannot stand. The proposition, of course, may be partly true. If measurement and diagnostic skills are equal, it is better to have participant involvement and the commitment that it generates, but commitment and involvement cannot substitute for measurement and diagnostic expertise.

Let us illustrate this with a hypothetical situation that potentially exists quite frequently. Let's assume a company that has, or feels that it has, problems in the area of working conditions because it has received a number of chronic complaints about certain characteristics of the work environment. Let's assume also that we want to identify the

problem that that represents and do something about it. The inappropriate way to do this would be to acknowledge that they feel they have a problem in the area of working conditions, promote some involvement in discussion about these issues, let them arrive at the point where they feel they need more information--and then simply, as a didactic exercise, ask them to go out and collect whatever information they feel might be appropriate to the problem.

The right way to do it, in our view, would be to measure those kinds of things about an organization that represent how it is functioning (of which working conditions are one outcome, but not a cause). In that case, we would obtain an accurate measurement by questionnaire or interview or observation. We would analyze the data that we collected and see what kinds of behaviors, at what levels of the organization, are associated with the kinds of decisions that lead to the grumbling that we have observed. We would probably find that these same kinds of behaviors and conditions are associated with other things that they are not currently talking about but have some high potential for disruption and trouble in the future.

As the illustration suggests, it seems appropriate to break the development of a strategy for organizational change into a diagnostic process and a therapeutic process, both of which are cross-related. Each process may be personal (that is, conducted by a live person) or instrumented. Each of the cells of this four-fold table identifies a particular style of change agency, illustrated in Figure 13.

In Artisanship, the change agent assumes both diagnostic and therapeutic functions to himself personally. Neither process is in any



Figure 13

## The Development Process as Two Sub-Processes

		Diagnostic Process	
		Personal	Instrumented
Therapeutic Process	Personal	Artisanship	Directed Therapy
	Instrumented	Classical Consultation	Instrumented Package

substantial way instrumented. Instead, he relies upon his own judgment and command of the field to (a) assess where the situation stands at any given moment, and (b) provide those events, inputs, or exercises necessary to further progress the development process.

At first glance, what is here termed Classical Consultation appears quite similar. As in the first style, the change agent personally diagnoses the client's situation without using instrumentation to any substantial degree. He then may recommend a course of treatment, but he does not personally provide it. In the classic way, he studies the situation and makes a recommendation.

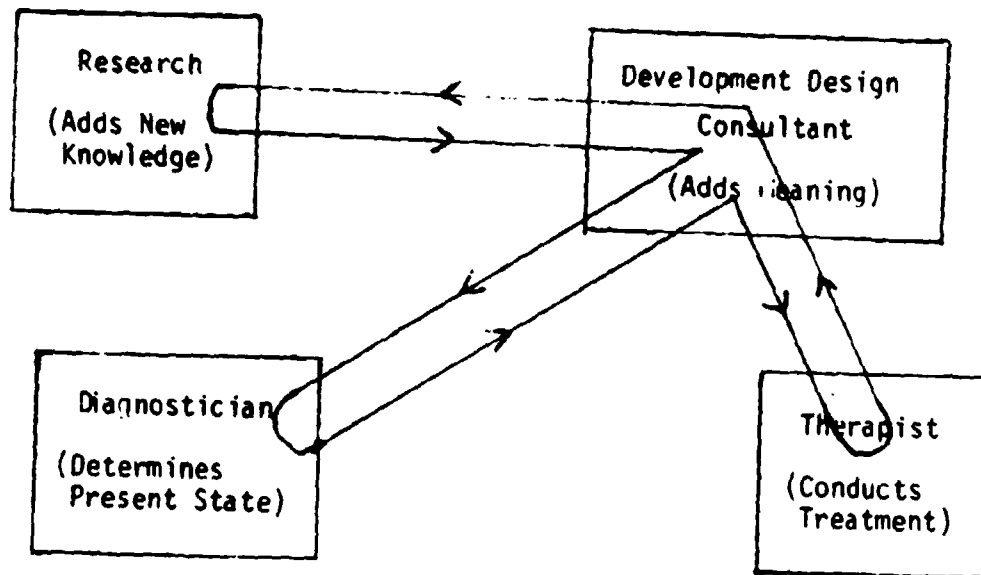
Directed Therapy provides an instrumented diagnosis, which leads the diagnostician (which is someone from the client system itself) to a recommendation for personalized service. It is, in the organizational development world, the equivalent of the "7 Danger Signals": "If any of the following appear, consult your local physician."

The Instrumented Package is what its name implies. Both the diagnosis and the therapy is obtained by instrumented, self-applied procedures. An analogy could be drawn in this case to the Canadian Air Force Exercise Manual.

More recent thought and experience suggest that still another role should be considered in a development operation. Besides the therapeutic and diagnostic roles, already described, there should be added that of Development Design Consultant whose purpose is to receive information from the other two, merge it with information coming from research in this area, and add meaning to the whole. In flow terms, the process would appear as it does in Figure .4.

Figure 14

## Flow of Information Through the Change Role System



It is at least interesting to conceptualize the ways in which these three roles converge and diverge at various points in the previous four-fold table. In that style of change agency labeled "Artisanship," for example, only the Design Consultant role remains; the diagnostic and therapeutic processes are both of unknown inclusiveness and not at all instrumented. As such, they disappear from separate identity.

If both the Diagnostic and Therapeutic processes were absolutely all-inclusive and totally instrumented, then the third (Design Consultant) role would be unnecessary. This is the case in the "Instrumented Package," where that third role disappears.

In "Directed Therapy," the Design Consultant and Therapist roles are personal and merged; the diagnostic function is instrumented and separate.

In Classical Consultation, the Design Consultant and Diagnostician roles are personal and merged; the Therapist function is instrumented and separate.

How should these functions relate to one another? One rule may be that the Design Consultant role can be safely combined with either function when that function is personal. Although this may at first seem a somewhat startling statement, the reasons for it are not in the least mysterious. The Development Design Consultant is the critical junction point for the development system; this role combines information with interpretive skill to add meaning. When either the diagnostic or therapeutic function is performed by a single individual, without benefit of instrumentation, and is combined with the design consultant role, there occurs great risk of bias, that is, that there will result a diagnosis or a course of therapy which simply fulfills the design

consultant's predilections, or a design merely consistent with what the consultant knows how to do best. In this sense, both Directed Therapy and Classical Consultation are particularly vulnerable combinations, since they merge Design Consultation with the personal, not the instrumented, functions.

Where the diagnostic function is highly instrumented, on the other hand, it can perhaps be safely combined with the Design Consultant role. Similarly, where the therapy process is highly instrumented, it can be combined with Design Consultation.

Central to a consideration of the science-vs-art issue is the point that some change agents enter a system with structure, data and purpose, whereas others enter only as process observers serving those dealing with system content. The former have, at least in their heads, an action plan which they intend to follow (recognizing perhaps that it may have to be altered en route). The latter have no such specific plan; they have instead a set of personal and process guidelines which they apply to situations as those situations unfold. One may, for example, hypothesize that pre-planners will be more inclined to create their "teachable moments" (those instances in which participants come face to face with evidence of the short-comings of present practices, or the possibility for improvement), whereas process handlers will work only with those that occur naturally. Pre-planners may also be ordinarily concerned with a longer time span of client relations than process-handlers, and pre-planners may make more use of cognitive inputs, whereas process handlers make more use of affective inputs.

Each of the four approaches just mentioned (Artisanship, Directed Therapy, Classical Consultation, Instrumented Package) contains a degree of risk. If an organization chooses a change agent who is essentially an artisan, what he, just one person, perceives in the organization may not be correct. The organization risks a wrong diagnosis, and possibly improper treatment, if he happens to be personally inept.

Furthermore, some agents are directed therapists--they use the same methods and tools regardless of the situation. With them the organization runs the risk of methodological inadequacy in the diagnosis; of course, these same risks appear in classical consultation.

An organization which turns to packaged self-help programs itself assumes the perhaps invisible risks of distorting the diagnosis or inadequately administering the treatment. Furthermore, the person or persons who designed the package may have been inadequate to the task.

How, then, does the manager protect himself from the personalized change agent with his own biases, or from the imperfectly drawn instrument? The law of large numbers suggests that where there are the greatest number of perceptions and the greatest pooling of skills, there should be the least risk. By this criterion only, the instrumented package would appear to be the least risky, whereas agent artistry is most risky, at least in terms of the likelihood of inaccurate perceptions and inappropriate prescriptions entering the change process.

We should recognize that the least risky may not be the most productive in any particular instance, however. For one thing, the presence of an identifiable person means that he can handle things which occur

outside of standardized instrumentation. He can handle rare events and unique situations and can take into account sequential side effects which infrequent instrumentation cannot.

In change agency there is, of course, the possibility that the area in which the change agent works reflects primarily his own attributes. He may, for example, work in areas of longstanding personal difficulty, or alternatively he may work in areas of his own greatest skill and comfort. In other words, he may work in those areas that cause him the greatest amount of personal trouble or on those things that cause him the least amount of personal trouble.

Change agents may also make alternative assumptions about the nature of organizations. A change agent may, for example, regard organizations as clusters of rather faceless operatives organized around sets of "key people." If he does, he probably will adopt very intensive treatments focused about these key people. On the other hand, he may regard an organization, as we do, as an enduring system which does more to mold persons who occupy positions in it than do the persons to mold the organization. If he does, he will probably adopt extensive rather than intensive treatment strategies.

Economic considerations enter, too. Today at this state of development of the profession, there are too few personal change agents to handle the development needs of all organizations in our society. Using such people tends to be an expensive proposition. If we are dealing in the probability of a successful outcome in a large number of instances, then it is probably more economical to rely upon impersonal, instrumented techniques than upon personal, direct agent-involvement techniques.

### The Change Agent's Role: a Summary

The view presented here, therefore, is that the change agent's role is more than that of a catalyst. What is required is more than simply improved problem-solving or reduced defensiveness, more than simply stimulating or refocusing helpful processes that are intrinsic to the user system. Rather, the view that the change agent is an adjunct to normal transduction processes implies that expertise is certainly added to referent power in his power base, not accorded the doubtful status attributed to it by catalytic formulations.

To summarize, conceptualized in transducer terms, the change agent's role encompasses at least the following characteristics, requirements, and capabilities:

- Links knowledge to action, resources to users.
- Works from, and knows well, a model of organizational functioning and change which is a reasonably comprehensive portrait of what occurs in the real world.
- Knows the body of empirical evidence which undergirds the model.
- Knows measurement, its techniques, assumptions, and limitations. Is aware of the difference between a controlled and an uncontrolled observation, between a hunch and a fact.
- Relies upon tested instrumentation and procedures.
- Converts information (broadly defined) into forms capable of being circulated inside the user system.
- Knows how to present the model to users in ways which are accurate and not generative of resistance, rejection, and defensiveness.



- In order to make knowledge available in a supportive, not a demeaning, manner, he has group and interpersonal process skills which he views as means, not as ends in themselves.
- Treats the whole organization as a social system, in all of its components and subsystems.
- Takes an extensive stance, one which emphasizes the possible, ultimate usefulness of a wide variety of activities.
- Is aware of, and takes steps to avoid, over-advocacy, which a lucrative consulting world sets as a natural trap for those who lose sight of their identity as applied scientists.

## Chapter 6

### Survey Feedback

Feedback is vital to the adaptation process in any organization. The information and procedures comprising feedback serve as the basis for changing organizations in ways which are responsive to needs for improved functioning, and ultimately, survival. The form and content of feedback varies with the type of organization and the sophistication of the feedback procedure. Most typically, however, organizations periodically receive indications of the quantity and quality of outputs (i.e., goods or services), the acceptance of outputs (i.e., demands for goods or services), and costs associated with the production of such outputs (i.e., number of units produced or amount of service rendered for given amounts of inputs). Although such data often provide interesting indicators of organizational performance, they are seldom of particular value in OD efforts. The lack of utility stems both from their focus (i.e., system outputs rather than throughput processes) and the fact that they represent end products indicative of the results of many conditions and events which existed in the past but not necessarily in the present or future.

On the other hand, survey feedback, as it exists in organizational development, relies upon information generated from organizational members and focuses mainly upon throughput processes which precede and affect outputs and which can be altered more directly than organizational outputs. More specifically, survey-guided development relies upon information responses from organizational members describing the functioning of the organization and of specific sub-units (i.e., departments, work groups,

individuals) in accordance with the concepts and the model set forth in the second chapter.

Although survey feedback is not a recent development, little has been written describing it and consequently, confusion exists regarding its form and its potential utility in organizational development. It should be emphasized that survey feedback is more than the simple return of aggregated data. Properly employed, survey feedback is an integral part of a development effort involving extensive preparation of organizational members both to enhance an understanding of the data and to ensure that the data are utilized to minimize risks and maximize gains to individuals and the organization as a whole. In short, survey feedback represents one important but only a single part of a multifaceted organizational development effort.

Perhaps the most common misconception about survey feedback pivots upon the failure to distinguish the process and what it represents from the data and what they represent. For the unwary, a rush to action based upon this misconception all too often results in damage to the recipient and disillusionment for both the recipient and the purveyor. Survey feedback is a relatively complex guidance method which draws upon the device of the questionnaire survey to upgrade and make more complete, rational, and adequate a process inherent in social organizations.

#### The Nature of Feedback

At the root of survey feedback, as with any guidance device, are several fairly fundamental properties: (1) purposiveness, (2) a flow of events through time, and (3) periodic discrepancies of what occurs from what was desired or intended. The first of these refers to the perhaps obvious fact that "feedback" in the absence of some aim, objective, target, or purpose is meaningless. The recitation of stock market quotations may

be eminently meaningful to a broker or to an investor eagerly or anxiously anticipating his gains or losses; it has no meaning for a person who has no stake in it, does not understand it, and for whom it is simply "feed" (i.e., noise). Similarly, unorganized data concerning various aspects of organizational functioning (e.g., communications, leadership, satisfaction) so often passed off as survey feedback in development efforts are received with confusion and indifference because, to the recipients, such information is simply noise. What is lacking is a prior understanding of the concepts which the data represent and a framework for organizing the data.

The second basic property points to what must be implicit in the term "feedback," namely that a number of events occur sequentially across time. They flow from an action by the potential recipient to an end-state about which he hopefully gets information on how well the sequence has gone. This is represented by the cause/effect sequences described by the model of organizational functioning. The events are described in terms of a causal flow including causal and intervening variables in the throughput sector which result in individual, group, and, ultimately, system outputs.

The third fundamental condition simply states that for feedback to be useful (i.e., to result in mid-course corrections), one must assume that some difference or discrepancy exists from time to time between what has been desired or intended and what has actually occurred. The need is for a gap between two states which serves as a basis for motivating movement from current to improved levels of performance.

Building upon these three basic properties, one is able to distinguish feedback from other forms of information input. Information which is novel and extraneous to accepted purposes, while potentially quite useful, is different from feedback. Information which refers to events now complete

and not likely to recur is not feedback and, for guidance purposes, is as likely to be without value as is information which conveys no difference from what was intended (i.e., leads to no action).

### Descriptive or Evaluative Feedback

As a somewhat more concrete level, much is often made in interpersonal settings of the value of providing feedback that is descriptive, rather than evaluative. To the extent that this percept refers to avoiding the debilitating effects of threat and punishment, one can only concur. Both research and experience indicate that fear, resentment, and excessive anxiety at best can be counterproductive, at worst paralyzing and highly destructive.

However, this is a different genre of issue from that which arises if one insists that feedback, when provided, must be unconnected to value judgments of goodness and badness, usefulness, desirability, and the like. In fact, the heart of any feedback process is precisely that: a reading, returned to the actor, on how well or how poorly things are going in relation to what has been done. In this sense, feedback (including survey feedback) is evaluative.

The highly desirable property of descriptiveness is therefore determined not by the extent to which it avoids evaluations (it does not and cannot), but by the extent to which it encompasses in its message information about the flow of events leading to the outcome. As such, it must be connected, in a way clearly understood, accepted, and believed by the actor, to a model of those events which includes cause-effect relationships.

In form, it is built around the notion that if the actor does A, it results in B, which in turn produces C. Although feedback that lets the actor know only that he has not attained in his most current attempt(s) the

desired state of C certainly possesses some utility, feedback that tells him as well that his A was inappropriate, or that it did not lead to a sufficient B, permits him to revise his actions and perhaps the model itself on something more than a trial-and-error basis. It is in this sense that another property commonly felt to be desirable in feedback--that it be helpful--reflects a great deal of truth. However, helpfulness resides more in what the feedback permits the actor to do constructively than in the demeanor or tone of the purveyor.

Turning to the specific case of survey feedback, the substance of these points is that it must:

- be built around a model which has a maximum likelihood of being correct (that is, around principles of behavior and organization derived and verified scientifically as appropriate to the situation);
- be clearly tied, through this model, to outcomes which are positively valued; (that is, the throughputs described in the model must be shown to have relation to individual or organizational outcomes); and
- provide a return of model-valid information relevant to more than merely the outcomes of the process represented by the model.

#### Previous Endorsement of Model

Finally, an obvious corollary is that the principles, ideas, and concepts which make up the model must be accepted and endorsed by the actor before, not merely after, receipt of the information intended as feedback. A survey feedback operation launched without this prior acceptance, but in the hope that the information fed back will itself be persuasive, is

foredoomed to failure for those same reasons mentioned in the earlier stock market quotations illustration: The input will be meaningless and therefore rejected. Where the principles and concepts contained in the model and operationalized in the survey are not understood or accepted in advance, the leader, change agent, or facilitator is well advised to proceed no further until, by training or planned experience, the understanding and acceptance has been implanted. In survey-guided development this implantation occurs through participation in training sessions ("Concepts Training") which combine informational inputs, experiential exercises, and role playing techniques to provide participants with both a cognitive and affective understanding of the model.

#### The Character and Quality of Data for Survey Feedback

Understanding the causal sequences--let alone measuring them--involves us in an immediate paradox. If we say, for example, that A causes B, we have to assume two mutually contradictory things: that both A and B occurred at exactly the same point in time (since no event can be caused by something that it is not in contact with), and that A must have preceded B (since a cause must occur before its effect). In everyday life, we solve this problem by storing large numbers of connected A + B events and looking at them for some period of time.

The same practice holds true for the survey. In describing in a questionnaire the behavior of their leader, the behavior of their fellow members, or the conditions present in the larger organization of which their group is a part, respondents summarize a large number of specific acts and events, some of which have caused others. The picture which results in the tabulated data, although taken at one point in time, is a composite

photograph of the person, group, and/or organization as it has persisted over some period of weeks or months. By the changes observed in the picture from one administration and feedback to the next, movement is depicted in much the same ways as in a motion picture.

#### Accuracy of the Picture

The accuracy of the resulting picture depends upon the care which goes into those several aspects of the process and upon the instrument which reflects their design: the accuracy and adequacy of the body of principles and concepts upon which both the model and the instrument have been built (are they the result of rigorous research, or of armchair extractions from experience?); the reliability and validity of the questionnaire instrument and its measures (does it measure dependably and accurately what it purports to measure?); and the conditions under which the data are collected (trust, confidence, care, and clarity of procedures).

Beyond the conventional indicators of validity, the procedure employed in survey feedback relies upon the consensual validation implicit in collecting multiple perceptions of the same events from several persons. Those who view and report about the same phenomenon should substantially agree in their perception and differ from other persons perceiving other events.

#### Perception of Threat

Confidentiality of individual responses also plays a considerable role in the validity question. Organizational development employing survey feedback procedures is seldom undertaken in other than hierarchical organizational settings. The differences in positions, roles, status, and power which this fact implies makes respondents vulnerable in some respect to being held accountable in punitive terms for having expressed themselves. If the threat



is real, and applicable to the majority of respondents, the facilitator's attempt to use survey feedback to develop constructive problem-solving obviously faces a situation of model nonacceptance.

However, more common, and in some ways critical, is the real perception of an unreal threat, and it is this anxiety which the confidential treatment of individual responses helps allay. Even though it is obvious to respondents that some handful of personal background items could identify them, there is considerable reassurance in not having to place names upon questionnaires. "Taking attendance," scrutinizing a respondents' questionnaires, peering over shoulders are similarly to be avoided.

Observing these cautions, together with aggregating data across all respondents in the group and into summary indices geared to the group's size (a mean response preserves confidentiality in small groups, whereas a percentage spread does not), helps guarantee that the results will be truly consensually valid and reasonably free from distortions attributable to a threatened position.

#### A Representation of Reality

What results from the data, of course, is a representation in abstract symbols (numbers) of the organizational reality in which respondents live. Events have been summarized by each respondent across some period of time considered to be appropriate, translated by the survey into numbers, and summarized in the tabulation across all members of the group. Their subsequent ability, in the feedback process, to translate this back into a common experience base about which joint conclusions can be drawn depends upon the clarity and concreteness of the original questionnaire items. Clear, concrete, descriptive items are more readily converted in the

discussion back into clear, concrete examples than are fuzzy, abstract ones. It is precisely this translation-summarization-conversion process, resulting in a shared view of problems and strengths, which lies at the heart of survey feedback's pay-off potential.

### Critical Aspects of the Feedback Process

The usefulness of the survey data depends as much upon the nature of the feedback process as upon the character and quality of the actual data. Although a complete treatment would involve a consideration of specific aspects of this process, we will focus at present upon only four additional major issues: (1) the role of a resource person in the process; (2) the pre-existing role relationships of persons in the groups; (3) feedback sequencing for groups at different hierarchical levels within social systems; and (4) the place and value of the survey feedback process.

Effectively done, survey feedback is a complex process requiring special knowledge and skills. Its success depends largely upon the ability of the individuals involved to understand and subsequently use the data as the basis for altering conditions and behaviors. In most cases the recipients of survey feedback require the help of a resource person who provides expertise and skill in several areas and who serve as a link between these persons and those other resources (e.g., knowledgeable persons) which serve as a potential energy source for the group's development.

### The Resource Person's Role

The resource person's expertise must include an understanding of organizational processes and techniques of data aggregation and statistical analyses. In addition, this person must be skilled in helping the recipients understand and use the feedback data constructively. Abilities

related to these functions include those of formulating meaningful pictures of social interactions on the basis of quantitative information and interacting with individuals and groups to facilitate the constructive use of the data.

It should by now be apparent that the resource person's role is not an easy one. To be useful to the process, he must know the group's data thoroughly prior to any feedback-related contact with its members or its leader. Only a thorough grounding in data analysis and interpretation can provide this skill, and only extensive practice can perfect it. In the group's discussion, he must be able to distinguish the elaboration and refinement of otherwise tabulated reality from the frequently exciting, but obfuscating, attempts by the group to provide the consultant with what it is they think he wants to hear and work with. He must be able to intervene in the process to keep it on track with the model and with what he knows represents a profitable course for the group. Yet he must do so in ways that avoid his being perceived as "laying it on," telling them what to do, or solving their problems for them.

#### Group-Member Relationships

Through all of this, the resource person must remember that the feedback group meeting or training session is an artificial setting for the group's members. The fact that, in survey feedback, they are and ordinarily have been for some time imbedded in a network of relationships, roles, and functions means that, for them, the greater part of their organizational reality exists outside that setting and is more closely aligned to the data than to the process which he has stimulated.

It is for these reasons that it has been suggested that feedback is most profitably carried out within the context of work groups consisting of a supervisor and all persons reporting to that supervisor (Mann, 1961; Neff, 1965; Miles et al., 1969). The preparation of the supervisor for subsequent meetings involving all group members is quite important to the overall success of the feedback process. This is emphasized by Alderfer and Ferriss (1972): "Our experience was very consistent with Mann's [1957] view that the reaction of the superior in the group is crucial in determining how the rest of the group reacts to the feedback" (p. 241). Only after adequate preparation concerning the meaning of the data and appropriate behaviors for the group feedback session can the supervisor, who must lead the group session, be expected to cope constructively with the stresses and strains of meeting with subordinates.

#### "Waterfall" Design

Although this latter principle is extended by some to augur for what is known as a "waterfall" design of survey feedback (beginning the process at a subordinate echelon only after it is complete in several sessions at the echelon above), this would appear to be an unnecessary elaboration. The modeling, which is presumed to be an advantage, seems in fact to be less important than the reassurance which is provided by having had an exposure as a subordinate in the group above. This seems to be largely accomplished during the first or early session. Adhering to a "top-down" design, yet pushing to as nearly simultaneous feedback to all levels as possible, would appear from experience and such evidence as exists to be an optimal strategy.

### Stages of the Feedback Process

The initial step in the group feedback meeting involves a familiarization with the tabulated data which summarize the group members' responses from the survey. The data are usually presented to group members from the supervisor in the form of written and verbal summarizations. Quite often the supervisor will introduce the meeting by recounting the total development effort and specifically emphasizing the role and purpose of the survey feedback activities. After distributing copies of the data in numeric and graphic form, the supervisor assisted as needed by the change agent, solicits comments from group members concerning the meaning of the data. Special attention is given to particularly low scores indicative of problem areas. The primary task during the early stages of these sessions is to gain an understanding of the meaning of these data by examining specific behaviors and conditions reflected in the numeric abstractions.

Thus, group members are encouraged to suggest specific common events which serve to illustrate and clarify the meaning of the survey data.

Once the transition from the numbers to specific conditions and behaviors has been accomplished, problem statements are formulated. Because of a tendency to focus upon problems caused by others or problems over which group members have no direct control, problems are usually classified within two separate categories. The first includes factors external to the group (often identified in discussions focusing upon organizational climate), and the second consists of areas largely within the influence of the group (usually arising from a focus on leadership and group process areas). The first list is passed along from the group's supervisor up the organization to higher levels for solution. The second list serves as the focus for problem solving within the group.

Throughout this process the supervisor moderates the discussion and keeps a record of key points. This is often accomplished by posting issues such that they can be viewed by all group members. The change-agent serves to correct and clarify issues regarding data collection, organization, and presentation. When appropriate, the change-agent may also provide inputs to establish motivating gaps and to generally facilitate the process of the sessions.

Once problems have been identified, they are sorted out and problem solving activities begin. The sorting process involves ranking the problems in order of importance and ease of solution. It is important that the group experience early successes in their problem solving attempts. Such early successes are needed to convince group members that they have some control over their functioning and to motivate them to attack additional problems. In fact, the process of identifying problems almost always results in immediate solutions to some problems which have arisen because of misunderstandings or the lack of readily available information. As initial problems are solved, energies of the group become focused on other problems generated from the survey feedback sessions or arising as a result of subsequent charges.

At the end of each session, the group may focus attention upon its process and suggest improvements for future meetings. The change-agent usually guides this procedure at least until group members gain experience and expertise in this area. After each session, the change-agent and supervisor often discuss the events of the meeting and the change-agent provides feedback to the supervisor regarding the effects of his behavior upon the group's processes.

### The Place and Value of Survey Feedback

The point has been made that the survey feedback process ordinarily is attempted within complex social systems. This point cannot be overstressed; it is this fact, principally among others, which ordinarily complicates even further an already complicated process. Survey feedback is a method, procedure, or technique representing but one element of survey-guided development which encompasses, in addition to survey feedback, the use of survey data to diagnose the organization as a functioning social system; it also establishes the proper sequencing of inputs--determined through diagnosis--of a (nonfeedback) informational, skill, and structural-change variety.

A person proposing to move, as a facilitator or change-agent, into a survey-guided development effort cannot hope to do so without first understanding the processes of survey feedback.

## Chapter 7

### The Evaluation of System Interventions

If change is adaptation, and the view expressed here is that it is, then it is inherently evaluative. It is evaluative precisely because initial movement is but the latest in a continuous series of purposeful moves over time, each dependent upon assessing present location and its distance from a target.

Despite this, many development programs begin, endure, and end without anything remotely resembling a decent evaluation. In this present chapter, we shall explore some fundamental notions about evaluation, together with issues concerning criteria, methods, and the utilization of the knowledge which evaluation produces.

#### Some Basic Concepts\*

An earlier chapter discussed in some detail our view of the organization as a social system. As such, it may be thought of as importing energy from the environment, transforming it into goods or services which are then exported into the environment, to be exchanged for renewed inputs. In form, it constitutes an input-throughput-output process. In the most general sense, therefore, organizational development concerns itself with providing additional or alternative inputs calculated to alter the throughput process in such a way as to generate additional outputs per unit of input.

---

\*For a more complete discussion of some of the issues in this section, see Anderson, et al. (1975)



This means that organizational development must begin with the greatest possible understanding of (a) how the throughput process works in organizations in general, and (b) how the throughput process of the organization to be developed is working specifically. Thus systemic organizational development becomes a procedure of attending, not only to the direct effects of an intervention (alternative inputs) upon the immediate segment of the system which it impinges, but also to its secondary, tertiary, etc. effects upon the more remote parts.

Strictly speaking, an intervention is appropriate only when the algebraic sum of its effects, both direct and derivative, upon immediate and remote segments, add positively to the ultimate output/input ratio of the organization. Of course, fulfilling this ideal in practice exceeds the state of present knowledge and capability. Still, the organizational development scientist who espouses a systemic view attempts to come as close as humanly possible to meeting this criterion in the design of what he does.

To evaluate means to assess or to determine the worth of something. While evaluations may be undertaken which contain little or no future relevance (e.g., one might "evaluate" the role and importance of an historical figure upon the politics of his time, with little or no direct thought to its present-day consequences), in most contemporary evaluations the future is of considerable direct importance. This is particularly true in conjunction with interventions in social systems, for which the connotation is decidedly contemporary, and some decision process is always implicit.

Customarily viewed, an evaluation may be summative (geared to an assessment of overall outcomes and to a decision to continue or terminate a development effort) or formative (intended for providing feedback for program improvement, in order to choose among possible modifications).

Summative evaluation is perhaps most congruent with an engineering model of the process, a model which focuses upon differences in output and input, often from a cost-benefit viewpoint. As such, it usually provides enough information to assess overall worth or impact (and may in this fashion be useful to decisions about whether to continue an effort in its present form, replicate it in other locations, etc.) but insufficient information for developing or revising the effort itself.

Formative evaluation, on the other hand, is a more complex paradigm, one more congruent with what has been labelled a medical model of evaluation. According to this view, evaluation should focus, not only upon inputs and outcomes, but upon process and context as well. The evaluation of any treatment should include an assessment of a broad array of characteristics of the organism and its environment, not just reported symptoms. As a process, it should go beyond simply estimating the size of effects to an investigation of the processes that produced the effects, to permit rational and constructive modification of them. It is also important in this paradigm that possible side effects be monitored.

Clearly, such an evaluation procedure calls for careful consideration of a wide array of facets of any development effort. It is essentially a call for a systems analysis, one requiring comparative, longitudinal data and multivariate procedures (precisely because human behavior is complex and multiply caused). The data employed must meet appropriate criteria

of objectivity, reliability, and validity, moreover. Stated in this fashion, summative and formative evaluation seem to be quite different. Indeed, they are quite different operationally. Conceptually, however, the difference may be more one of time and generality than of intrinsic substance.

These points are explored quite nicely by Blalock & Blalock (1959) in their discussion of the general problem of applying system analysis in the social sciences. They cite Trimmer (1950) who more than a quarter century ago observed that the customary mode of thought in many of the sciences is to think of something a being done to something b, which in turn does yet another something c. He used the terms "forcing," "system," and "response" to indicate the postulated relationships (See Figure 15).

Of course, systems interact, and a somewhat more complex arrangement is that in which the response (output) of one system is the forcing (input) for another system. In addition, one may think of a larger system, made up of some number of smaller, interacting systems. Blalock & Blalock have in fact illustrated this arrangement much as it is displayed in Figure 16.

When we examine the properties of System A in this figure, we may do any or all of the following:

1. Look at measures which summarize individual properties of the "little" systems a and b (e.g., frequency distributions of things internal to each, like attitudes of members).
2. Look at measures which reflect interactions between the two "little" systems (e.g., the extent of their cooperation or competition, how events stemming from one affect the other, etc.).

Figure 15  
Science's Customary View of Events

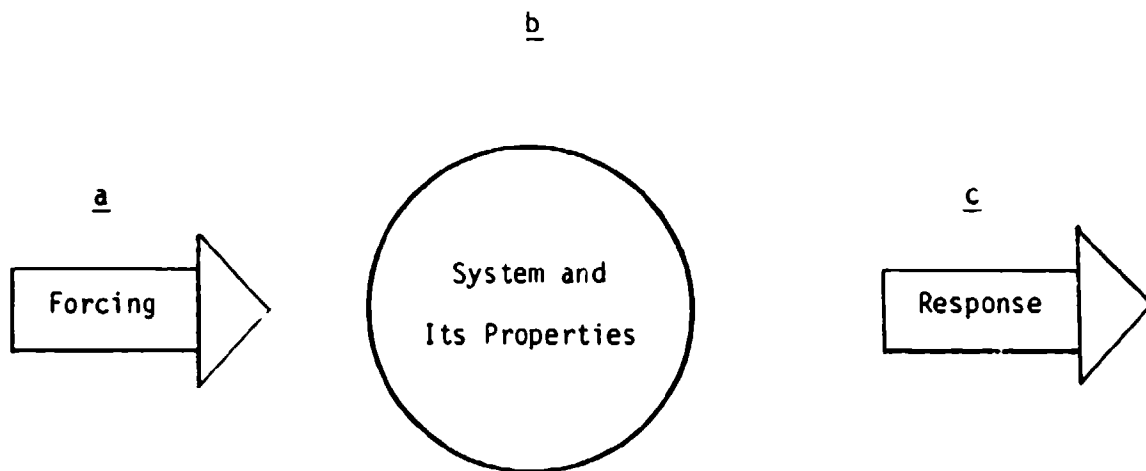
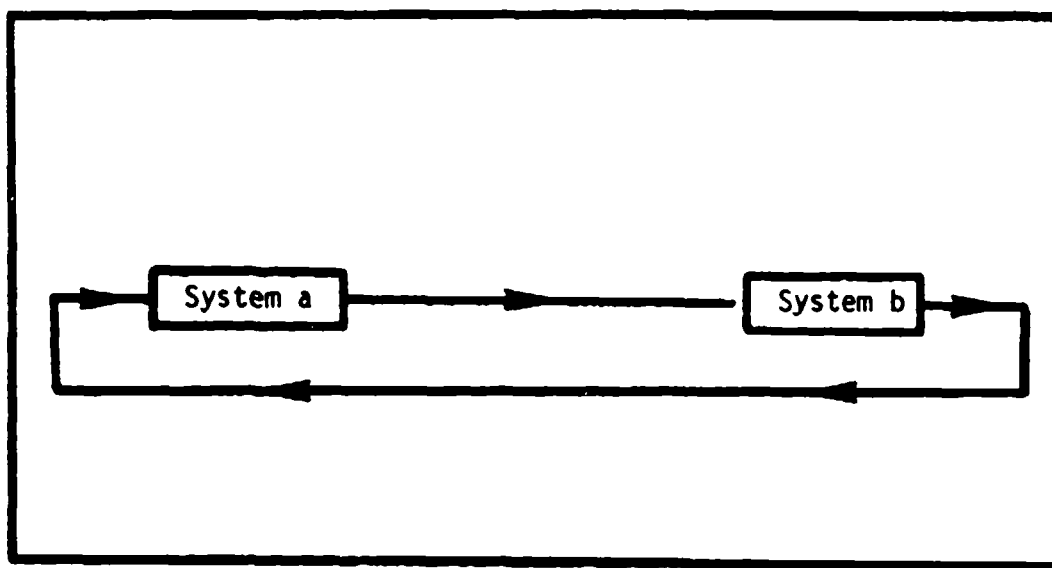


Figure 16  
INTERACTIONS OF SYSTEMS

System A



3. Look at measures which reflect the individual behavior (responses) of the two "little" systems (e.g., the output of each, cost performance for each, etc.)

Returning to the difference between summative and formative evaluation, one perspective is that a summative approach treats a large system (such as A), which itself contains a number of component processes (such as a and b) as if it does not contain them. It does not look at the properties of the larger system (such as A), but at that larger system's forcing and responses, i.e., at what was inputted and outputted.

Much as the diagram indicates, the objectives of any development effort are sequential, multiple, and multi-leveled; that is, they range from the more specific, concrete, and immediate to the more general, abstract, aggregated, and ultimate. The more complex the system, the longer the loop involved. Moreover, true long-run effects may be obscured by short-run events. This is one source of erroneous feedback; it also constitutes an important reason why organizational development in complex systems really cannot be done reliably without objective measurement. For example, it may be that an "all is well" message which a system receives is erroneous. All is not well, but the model and ideal which are in place are so bad in themselves that behavior congruent with them produces results which, though truly poor, are expected. Lacking objective measurement, no corrective exists, and, like the proverbial laboratory frog, the system may be "boiled alive" before it realizes that anything is amiss.

An organizational development effort, therefore, is not a discrete event, but a series of events which interact over time. For those designing and implementing the intervention, targets are both ultimate

and immediate. Which is which is defined largely by the boundaries of the organization in which it is proposed that the intervention occur. Ultimate targets lie at the "far" or output boundary, while immediate targets lie at the "near" or input boundary of the stream.

Note should also perhaps be taken of certain other facts involved in systems analysis. As stated by Hagen (1961), these are:

1. The elements or properties of a system are presumed to vary in magnitude and are for this reason called "variables."
2. Variation implies, at least in principle, measurability; a characteristic that cannot be measured cannot be considered rationally as a variable. (However, at any given time the existing state of measurement technology may permit no more than nominal scaling.)
3. Although any system in real life which interacts with its environment is an "open" system, when we analyze them we treat all systems as "closed." That is, we assume that, at the point of measurement, only inputs that were previously in place from the environment are reflected (i.e., the system is not changing during analysis). We may, however, open a system up to change and measure the effect once more at a given time point. In this sense, our analysis is analogous to studying frames of a motion picture.

#### Criterion Issues Concerning Evaluation

Defined as it is in terms of boundaries, the "ultimate" criterion of success for an organizational development effort concerns events on the far, or output, side of the system. Stated as additions to output for the same amount of input (and by extension, the reduction of the amount of resources which must be consumed in maintaining an ineffective throughput process), the purpose of a development effort is the enlarging of the capacity of the organization to do its "work"

(i.e., whatever it is that it "does"). A basic dimensionality seems at least in part to be obvious and implicit in this definition. There is, first of all, some measure of the volume of such "work" that is done. One is ordinarily not concerned about straight volume, however; in this sense, sheer volume is a nonsensical criterion of effectiveness. That a large bicycle manufacturer produces thousands of machines and Joe's Bike Shop dozens does not necessarily make the former thousands of times more effective than the latter (although it may in fact be so). On the contrary, a large producer may be in the process of going bankrupt, while a small-time competitor makes a fortune. There are, of course, times (e.g., World War II) when volume alone is important. But in most instances volume in relation to something else is preferred. For example, volume divided by the number of employed persons would be a better indicator than volume alone. That, however, is still not acceptable, since one may imagine a manager who succeeds in producing as many units of product with more people who are less skilled and in toto less costly than his counterpart in the next department who is able to produce the same number of units with somewhat fewer persons, all of them at a much higher skill level and a far greater total cost. A much better indicator is volume in relation to some expected level, standard, or capacity.

The cost of doing the "work" is another basic dimension. Cost alone is also nonsensical, however. Cost is absolutely higher when more work is done, nil when no work is done at all. Here, as before, it is cost in relation to some level or standard that is important, ordinarily a volume standard.



Quality, another basic dimension of work, similarly stands not alone, but in relation to the others. One is ordinarily not interested in devising an organization capable of producing only one absolutely perfect unit, regardless of cost, but an organization capable of producing as many units as possible of the highest possible quality at the lowest possible cost.

Although different organizations may establish different cut-off points for acceptability on volume, cost, or quality, reflecting different patterns of internal need and external requirements, it does seem at least possible that one might consider some standard array of effectiveness (output) indicators to include:

1. Volume of "work" as a per cent of capacity, or alternatively as a per cent of schedule;
2. Cost per unit of "work";
3. (Quality x Volume), divided by total cost.

All other dimensions would then enter as criteria of organizational development efforts only for either of two reasons:

- a. They are precursors of one or more of these measures; for example, absenteeism is costly; dissatisfaction leads to costly turnover, etc., or
- b. Those responsible for the effort have erroneously declared their purpose to be development of a system at one level of aggregation, when in fact the purpose is development of a system at another level.

Those familiar with the field will perhaps react with some dismay at the fact that this formulation relegates to second-class status as criteria of organizational effectiveness such "people" measures as "identity," "satisfaction," "morale," and "revitalization." In some cases these characteristics reflect the individual person as a system and are

perfectly appropriate for defining the "work" of such a system. In other instances the characteristics listed may be reflective of the effectiveness of that super-system known as "society." If they are, it is because we adhere to a set of humanistic values and define society's "work" at least in part in these terms. It is equally possible, however, that, even at this level, these effective criteria are of a second order of importance--that "people" measures are important because unhappy, alienated, dissatisfied, and hostile or apathetic persons are a costly drag upon society's progress and achievement.

In those terms employed earlier in conjunction with Figure 14, when the organization is the system and individuals or groups systems within it, it is appropriate to examine as part of an evaluation effort the properties of the component or "little" systems (individuals or groups), but it is not appropriate to assess changes in the larger system's functional effectiveness solely in terms of those properties.

An evaluation strategy which was thus "results" or goal-attainment oriented might focus solely upon the system's output thus defined, and from a summative viewpoint produce an adequate evaluation. As might be expected, others have recommended that attention be paid (though not necessarily limited) to the input and throughput processes. Yuchtman & Seashore, for example, suggest that the input process be stressed in determining effectiveness:

We propose, accordingly, to define the effectiveness of an organization in terms of its bargaining position, as reflected in the ability of the organization, in either absolute or relative terms, to exploit its environment in the acquisition of scarce or valued resources. (1967)

Bennis (1962) rounds out the array of possibilities by suggesting that throughput--the functional characteristics of the system--provide a primary criterion of organizational effectiveness.

In each instance, obviously, literally accepting criteria at the recommended stage, and that stage only, would provide an inadequate basis for evaluating an intervention. For formative purposes, one must be certain that the intervention (input) did what it claims or intended to have done. Since its intended impact was presumably upon one or more aspects of organizational functioning, that too must be measured and the impact analyzed. Completing the chain, it was intended that the intervention's ultimate effects appear at the far boundary in the form of altered (enhanced) output. That too must therefore be measured and analyzed to determine whether changes there stem from postulated changes at the level of system functioning (throughput). To the extent that the chain appears to hold, we may be reassured that the intervention was successful. By assessing the entire chain in detail, we may locate slippages and inefficiencies in the process, feed those back, and thereby constructively modify the intervention in succeeding time frames.

#### Data Collection Methods and System Processes: An Evaluation Paradigm

A systems model of evaluation originally described in the work of Baker & Schulberg (1973) can be extended and adapted to the instance of systems interventions of an organizational development type. Combining systemic processes with data collection modalities, we have the lattice presented in Figure 17.

Figure 17

## An Evaluation Paradigm for Systems Interventions

		System Processes		
		(Intervention) Input	(Functioning) Throughput	(Effectiveness) Output
Collection Modalities	<u>Questionnaire</u>			
	<u>Interview</u>			
	<u>Observation</u>			
	<u>Documentation</u>			

For each modality, in relation to each systemic process, it is well to keep in mind the nature of acceptable data for evaluation purposes.

Such data should be:

- Objective - that is, they should be replicatable, "public," and relatively free from the self-serving proclivities of participants;
- Reliable - internally consistent (rather than stable, as an alternative definition of reliable, since it's change we're evaluating): had we had many measures of this same thing, the degree of certainty that we would have obtained the same result;
- Valid - that is, the measures should be tapping whatever it is that they are supposed to measure;
- Practical - in other words, obtainable without difficult, expensive, or time-consuming procedures;
- Useful - that is, productive of understandable results within the affectable lifespan of the program being evaluated.

Input evaluation - Any of the four modalities could conceivably be used to measure what in fact transpired during the input (intervention) process. Members of the organization could, for example, receive questionnaires which ask for descriptions of, or reactions to, events that transpired during the intervention stage. Although interventions characteristically encompass many separate events, each capable of being tapped in a questionnaire, with the possibility that respondents could

become "questionnaired to death," it is in principle possible to obtain information of the type required by giving questionnaires to participants, to change agents, or to both. Participants and change agents might similarly be interviewed, their responses recorded, coded, and tabulated. Observation is also possible, although the presence of a human observer is not necessarily required (video or audio tape recording also constitutes "observation"). Finally, documents might be retrieved from the files concerning attendance, problems or issues reported or discussed, events which emerged from the intervention, or reports by change agents.

Applying the criteria listed earlier, we can say that, while observation is the most objective of the four modalities, it is the least practical, and its reliability and validity are both questionable. The practicality of this modality in relation to this issue is limited by the necessity of in fact recording events as they occur (rather than via a "summarizer," such as the respondent). Thus, monitoring must be ongoing, at least on a sample basis, for as long as the period being assessed endures. Since organizational development interventions typically take hours or even days, have appended events which occur between formal sessions, and are joined in complex sequences over a period of months, the number of observations to be recorded, coded, and content analyzed is truly staggering. Some progress is currently being made in time-sampling audio tapes for this purpose, but the procedure remains rather costly and cumbersome.

Questionnaires are to be challenged for related reasons. Collecting data concerning the interventions themselves in the detail and at the level desired would require the administration of forms over and over and over again (e.g., following each "session"). For busy and involved participants, let alone overworked change agents, the frustration potential in such an exercise would be debilitating. Furthermore, unless the questionnaires were collected in face-to-face, group administrations, it would be unlikely that they would in fact be completed and made available.

Because interventions and the organizational development activities which they represent are temporary additional inputs to the system, it is unlikely that records and documents relevant to the information needs of evaluating the intervention will in fact be found in the normal record-keeping system. In addition, the development effort is itself likely to be sufficiently demanding (and perhaps expensive) that it prohibits the establishment of special, augmenting, information systems. Documentation thus declines in promise as a potential source of information.

Interviews, periodically and with both change agents and a sample of participants, are both feasible, economical, and productive, however. While objectivity is somewhat reduced, coming as the data do from those who are highly involved in the process and its outcome, what is gained seemingly outweighs the disadvantage. Multiple readings (measures) can be obtained and internal consistency assessed; construct validity can be tested, at least; and the results can be both useful and practically obtained.

To summarize, interviews--of a "debriefing" sort--have proved practical, reliable, reasonably valid, quite useful, and sufficiently objective for the purposes presently in mind. Indirect observational techniques (audio tape in particular) is also quite effective, although less practical. Questionnaires are perhaps only slightly more promising than documentation, and neither (in the authors' experience) is a high probability-of-success alternative.

Throughput evaluation - an assessment of the functioning of the system requires masses of data, from a large number of respondents, collected with minimum expense, and processed quickly. No other measurement modality approaches the questionnaire in satisfying these criteria. True, the participants may filter their responses through their eyes and aims, and objectivity may suffer somewhat--our experience and evidence suggests that, with care and measurement design sophistication, this tendency is minimal--but a compensating gain occurs. Those who provide the data are maximally familiar with both events and their meaning, behaviors and their historical context. Interviews may be as reliable, valid, and no less objective, but great expense is encountered in interviewing everyone in the organization, coding the results, and finally tabulating and analyzing findings. Furthermore, the time consumed in doing so may well make the product no longer useful (events will have passed it by). Documentation--for example, assessing organizational functioning by the content analysis of memoranda and correspondence--is possible, although tedious, time-consuming, and more costly than interviewing. Finally, observation is relatively undesirable because each act must be observed by a number of observers to attain equal reliability,



and the whole must go on for years to attain the same degree of validity represented by participants' questionnaire responses.

In order of attractiveness, therefore, for measuring organizational functioning (throughput) the four modalities would, in our judgment, rank from the questionnaire (most desirable) to interview, documentation, and observation, in that order.

Output evaluation - it is for evaluating this process that documentation attains its most useful rating. Record-keeping systems--management information systems in general, in fact--are designed principally to provide output documentation. True, the data may not be aggregated by the in-place procedure in ways that would be most readily useful to the evaluation of a system intervention, but they are there and in principle available. Questionnaires and interviews also have some usefulness in this regard; for all of their disadvantages and presumed lack of objectivity, rating scales and performance appraisals are often readily available. Observation--the counting and tabulating of output--is, of course, possible, but seems relatively inefficient, especially since the lag time factor practically guarantees that the outcome effects of any intervention will be distributed over a period of weeks or months, and that the exact dates can only roughly be predicted in advance.

Combining all of these, one might conclude that, at the present writing and state of the science, interventions themselves--the "input" to organizational development--are perhaps best measured by periodic debriefing interviews with change agents and participants, in some degree supplemented by indirect observation (e.g., by the content analysis of audio or video tapes on a time-sample basis). Organizational

functioning--the throughput process in this instance--can best be assessed by questionnaire, perhaps supplemented by interviews on some sample basis. Effectiveness--the output process--is best measured by documentation, perhaps supplemented by those rating scales and forms that, in this instance, comprise a "questionnaire" modality.

Through all of this, the suggestion of Baker & Schulberg (1973) that the strategy ought be one of multiple operationism is excellent advice. Each modality is to some extent method-bound; by basing our observations upon more than a single modality, each within at least some reasonable limits of practicality and usefulness, the results are more likely to be valid, reliable, and objective.

#### The Utilization of Evaluation

In an earlier chapter, a process was described by which values emerge from experience, and it was suggested that it is this customary configuration against which incoming negative feedback is matched to determine how much and what kind of effort is needed to restore the system to its "normal" state. If, in other words, information appears which is consistent with the basic structure of this value configuration, all is well and good. It is acceptable, it passes the boundary, is internalized, and is probably used. If, however, the information is seriously at odds with the very structure of this value configuration, it is denied admission and use. It and its purveyor are likely to be rejected.

Policy decisions, for example, are an output of a policy-making system. For the reasons just noted, they intrinsically take the form of

attempts to maintain the internal steady state of the agency making them. All is well when scientific knowledge coming to the system represents simply negative feedback concerning the attainment of objectives congruent with that steady state. But when scientific knowledge is at odds with the very value hierarchy of the agency's internal state, the knowledge and the knower become the "problem."

Information generated by the evaluation of a system intervention presents a similar situation. To the extent that the model of organizational functioning which underlies the intervention is the same one accepted and understood by organizational participants--particularly key decision-maker participants, all will be well and good. The data will be treated as negative feedback, and the system will employ the information for its own adaptation, i.e., for revising, modifying, upgrading, or intensifying the intervention.

If the intervention has gone forward without the requisite internalization of the model, however, the results of the evaluation effort may well appear counter-productive. An evaluation which shows that the intervention did not "take," or that it did not succeed, or that it in fact took some entirely different form from that which had been intended will be quietly and positively received by the non-accepting participants. It was, indeed, the "failure" which they had predicted and hoped it would be. If the intervention succeeded, but the intended organizational effects did not flow from it--the operation was a success, but the patient died--the antipathetic participants will conclude that they were justified in their earlier supposition that the organizational development proponents were deranged, fraudulent, or both.

The obvious implication of this is that the results of an adequate evaluation effort will be utilized for formative purposes to the extent that those conditions of advance preparation and model acceptance, so necessary for the organizational development effort itself, are in fact in place. As in the case of the utilization of diagnostic information, the findings from an evaluation must be adequately transduced if they are to enter the system and actually used. A person or persons, filling the function of an input and/or throughput transducer, must import the information across system or subsystem boundaries, in the process converting it to a form which can be circulated and used inside. While this function may sometimes or in some part be performed by line role occupants, it seems likely that in most instances the task will fall to the consultant or staff member who has been instrumental in the conduct of the evaluation. What is required of him is highly similar--in fact almost identical--to what is required in the action phases of the development effort itself. As a subsequent loop in the adaptation process, the evaluation-utilization phase recapitulates the earlier stages of the development process in which a current reading was compared to a desired, or target, state.

#### Evaluation--A Recapitulation

To summarize what has been said in this chapter, an evaluation of an intervention into an organizational system for development purposes should itself be developmental, that is, formative. It should be used as the basis for constructively modifying the effort in its future occurrences, not simply as a basis for keeping it alive or, alternatively,

"closing the books." The most appropriate form would appear to be what is termed a medical model, which calls for systems analysis. This requires a multivariate analysis of comparative, longitudinal data that, needless to say, are objective, reliable, and valid.

Cast in this form, an adequate evaluation must look at input and throughput, as well as output processes and the interconnections among the three. Four data modalities--questionnaires, interviews, observations, and records retrieval (documentation)--may conceivably be used in assessing events at any stage. Experience, together with considerations of cost and risk, seems to suggest that they are differentially appropriate to the three system processes, however. The intervention itself, in the form of the change agency or action input which occurred, may most readily be assessed by debriefing interviews or by the time sampling and content analysis of audio tapes from various sessions. Organizational functioning seems best measured by questionnaires, or alternatively, by interviews, while output--organizational effectiveness--seems best tapped by documentation (records retrieval) or questionnaire (rating scales, appraisals, and the like).

Finally, utilization of the results of an evaluation is determined by the same forces which affect the success or failure of the development effort itself--advance acceptance of the underlying model and adequate transduction of the information involved.

## Chapter 8

### Past Evidence, Present Practices, and Future Needs

We come to the end of this account with several tasks remaining. First, there is need for a brief summary of what has been said in the preceding chapters; this will be provided. Second, there is need for a condensed behavioral roadmap, a step-by-step descriptive guide to events in a typical survey-guided development effort. This also will be provided. Third, it seems incumbent upon us to cite relevant evidence which bears upon the validity of what has been proposed. Accordingly, an evidential summary will be undertaken. Finally, some degree of perspective on possible future needs and trends seems in order, and we shall conclude on such a note.

#### Survey-Guided Development: A Summary of What Has Been Said

Some portion of what may presently be considered organizational development came into existence through a route best described as a concern for the utilization of scientific knowledge. This data-based type of development originated, not from the search by practitioners for more effective helping tools, but from the concern of organizational management researchers for better ways of moving new scientific findings from the producers (researchers) to the consumers (organizational managers).

In this vein, two bodies of scientific thought seem relevant. One comes from the research done in the area of perception and involves the fundamental concept that a difference between perceptions is motivating. Another closely related set of ideas comes from engineering psychology and begins with the observation that human behavior is goal-seeking or goal-oriented. As such, behavior is characterized by a search for processes by which the human being

controls his environment. Oversimplifying this control process greatly, at least four elements are involved: (1) a model, (2) a goal, (3) an activity, and (4) feedback.

The model is a mental picture of the surrounding world, including both structural properties and cause-effect relations. It is built by persons from past accumulations of information, stored in memory. In the absence of a sound model, what is expected varies with immediate experience. It is for this reason that objective feedback on organizational functioning is absolutely essential in organizational development. In its absence, true deviations are unknown because expectations constantly adjust to incurred performance.

These two sets of concepts provide jointly a plausible rationale for organizational development as an adaptive process. As in the human factors area, feedback of information about the actual state of functioning provides key input to selecting development goals and making mid-course corrections. It tells the developing system what needs to be done. The power source, which in human factors descriptions is shown as an external input, is in organizational development provided by a perceptual discrepancy. Assessment data, by pointing to the existence of differences between what is actually going on and what the model indicates one wants and needs, provides the energy (motivation) to undertake the necessary change activities.

The primary role of the change agent in survey-guided development is that of a transducer (i.e., a link between scientific knowledge regarding principles of organizational functioning and change and the particular organization or group with which he is working). As such, he has a model

of organizational functioning in mind and works toward its realization. Except in those rare instances which require a non-directive stance, the change agent is an active advocate of goal-oriented behavior. He evaluates, and helps the client group to evaluate, progress toward the goal, but in so doing avoids being punitive. Needless to say, he must have a wide range of knowledge and skills and not be bound to one or two particular techniques.

Thus conceptualized, organizational development or change becomes a problem in social systems adaptation. Its component processes play roles analogous to their counterparts in manual adaption sequences. The diagnostic process is a goal-selection system, while the therapeutic intervention process is in reality an adaptive-control (mid-course correction) system. Evaluation, in the form of feedback, completes the loop as the entire sequence recycles. Stability is reached when the previously set goal is attained.

These, then, are some of the issues which these chapters have attempted to address. Organizational development is viewed as providing a wide array of different inputs to various persons, groups, and junctures of the organization, at precisely those times at which they will be maximally useful. To do so requires an accurate and reasonably complete model of how an organization functions. It requires as well a rigorous, instrumented diagnosis and evaluation procedure to monitor the development process. Because the behaviors and perceptions which enter the model are in large part those of human beings, the method of the survey (geared as it is to measuring things of precisely that kind) is proposed as a guidance device or servomechanism for organizational development efforts.



### Major Activities and Survey-Guided Development

Survey-guided development includes many separate but related activities aimed at planning, providing informational and skill building sessions, gathering, organizing, and evaluating information, and assessing outcomes. Although the specific form of the major activities varies among organizations, it is possible to provide a general description of the major elements included in the various activities. The activities can be classified according to ten major categories:

- (1) initial planning sessions involving key members of the outside consulting staff, plant management, and representatives from non-managerial personnel within the organization,
- (2) administration of the questionnaires to all members of the organization,
- (3) training for some members of the organization to act as internal resource persons in the feedback meetings,
- (4) training for organizational members in basic concepts describing how organizations function,
- (5) the return of data to group supervisors,
- (6) group feedback meetings,
- (7) the presentation of a systemic diagnosis,
- (8) the allocation of resources in accordance with needs indicated by the systemic diagnosis and feedback meetings,
- (9) gathering, organizing, and evaluating intermediate feedback to monitor progress in the change activity, and
- (10) a formal reassessment of the organization to examine progress.

### Initial Planning Sessions

The first major set of activities includes a series of meetings between outside consultant resources and persons who are members of the organization considering engagement in O.D. activities. This series of meetings takes many forms but usually includes representatives from specific groups and covers very similar materials. Participants from the organization, at least at the outset, tend to be upper level managers; however, during later meetings, others are often included. Depending upon the nature of the organization, these may be other upper level managers, representatives from other levels of management, or non-managerial personnel--often representatives from unions.

In the most general sense, the goals of these meetings are to establish ground rules for the development effort and to investigate the mutual commitment of the consultants and members of the organization. An important issue for the consultants at this point is to reach an understanding and agreement with members of the organization regarding restrictions concerning access to information. Among the most important considerations is that managers in the organization understand that their access to data is limited by several considerations which protect the confidentiality of data sources and help ensure that the information is used in positive rather than punitive ways. It is also important at this point for the consultants to understand the commitment that members of the organization have to support the development activity. This commitment takes the forms of financial support, support for people to attend meetings, and support in the form of individuals being made available to serve as internal resource persons during the course of the effort.

Members of the organization have similar requirements. For example, it is important for them to reach agreements with the consultants regarding confidentiality of their data. The usual procedure includes an agreement that the consultants may talk about and write about activities connected with the development effort, but they may not identify the particular organization. Further, it is important to members of the organization to gain commitments from the consultants regarding time and numbers of people who will assist in the development effort.

Another major concern includes the roles and expectations of different parties with prominent commitments to the change effort. There are four major groups that have such commitments. First, there are the outside consultants who are to guide and coordinate the overall change project, organize information collected from members of the system, and plan and lead many aspects of the training activities. Second are the internal resource persons who must at one and the same time remain members of the organization and yet be separated from other system members by virtue of their access to information which cannot be generally revealed. Although internal resource persons retain formal membership in the organization, it must be recognized that they have a unique role limiting superiors' rights to request certain specific information from these individuals. A third group are the system's managers who, for the purpose of the organization development, commit themselves, in the form of both financial and time resources, to the activities required for its support. The last group consists of non-managerial personnel, often union representatives, who make commitments to work with the consultants, internal resource persons, and managers for the purpose of attempting to improve the overall effectiveness of the organization.

The initial meetings are helpful, not only for the purposes stated above, but also to provide each member of the organization with realistic expectations and understandings of what the O.D. effort involves, and what they can expect as a result of such an effort. As with any establishment of expectations, however, there are dangers inherent in this process. If expectations are established which are not met, disappointment, dissatisfaction, and decreased motivation are predictable outcomes. Since these can have quite serious effects on the organization, it is of utmost importance that the parties involved are seriously committed to the activities prior to the initiation of next steps. In cases where commitment and agreement cannot be reached it is best that all parties be informed of the problems and barriers, and the development activities not be carried forth.

Organizational development, as we propose herein, cannot be successfully implemented on a "pick and choose" basis. That is, if commitment is not reached to engage seriously in all the major activities, it is probably best not to proceed with just those activities which appear as realistic possibilities. An approach of this type often results in dysfunctional results for the organization and its members. Probably the most serious problems arise when a decision is reached only to gather data, leaving for a future date a decision on next steps. Invariably this type of approach leads to a simple data handback activity, which often has been found to be dysfunctional to the organization (Bowers, 1973). Thus, as we progress to discussing the major elements of a survey-guided development effort, it must be borne in mind that we are not talking about several

Planning and scheduling for other major activities also occurs during these initial meetings. Figure 18 delineates the sequence of appearance and approximate time from the outset of a project that each activity is begun. Organizational development efforts of the type described here usually involve several months, and sometimes several years, of effort. A brief examination of the time involved between the major elements of survey-guided development projects provides an indication of the time frames involved. The first major event subsequent to the point at which initial discussions have reached tentative conclusions, is the collection of data through the use of questionnaires and interviews.

Approximately six to eight weeks elapses between the time that the data are gathered and the time that they are ready for feedback to organizational members. During this period, two major types of training activities occur. The first is conducted by the outside consultant staff for those members of the organization who are to be internal resource persons. The second major training activity is conducted by the outside consultants with assistance from internal resource persons for all managerial personnel. The focus is upon major concepts of organizational functioning. It is only after each of these training sessions has been completed that the data are fed back to the supervisors from each group and, subsequently, to the groups themselves. For any particular group, the feedback meetings may require from four to six hours (two to four meetings) to fully examine their own data. Problem solving activities may then occur during several additional meetings.

Order of Appearance, Time of Initiation, and Duration of Major Activities in Survey-Guided Development Projects

[illegible]

Once the groups have begun exploring their own data, information from the total organization is fed back to key personnel in the form of the systemic diagnosis. Subsequent to the feeding back of the systemic diagnosis, planning activities begin whose purpose is to prioritize major problem areas which pervade the organization and to allocate resources according to diagnosed needs. Within a few months of the initiation of the original feedback activities, intermediate feedback data concerning the progress of the meetings and the organizational development effort are sought through interviews with various members of the organization. Based on these interviews, and any other available information, adjustments can be made in the development activities. A more formal evaluation of progress requires a second administration of the questionnaire. This can occur any time after major corrective activities have been attempted, but the usual period between the first and second questionnaire administrations encompasses from nine to 12 months.

#### Collection of Questionnaire Data

An important basis for organizational development is accurate information regarding current system functioning. In survey-guided development the questionnaire survey is relied on as the primary basis for such information. At an early stage in the development effort, the instrument is completed by each and every member of the organization. This is typically done in groups of 25 to 50 persons who are given time off from their regular work assignments or who complete the survey during off hours.

The questionnaires are typically administered by persons from outside of the organization to ensure confidentiality of the data. In addition, confidentiality is ensured by the form in which the data are returned to the organization. At the time of questionnaire administration, respondents are informed that no individual will be identified with his or her responses. Work group members, that, is a superior and subordinates, do have access to the data which they supply. In addition, any supervisor is entitled to see aggregated data regarding summaries of responses from everyone within his area of responsibility. Thus, a department head receives data in two forms. First, data are received which summarize the responses of immediate subordinates. In addition, the superior receives data aggregated across the total department. The form of and access to the data are described in detail to respondents prior to completion of the questionnaire. In addition, at this time respondents are told how and when they will have an opportunity to see and discuss the data with other members of their work group and their supervisor.

For many respondents, the completion of the questionnaire instrument is the first exposure they have to the organizational development effort. The administration of the questionnaire provides an opportunity for active participation in the effort and familiarization with the total project by learning about forthcoming activities.

### Interviews

A secondary source of diagnostic data in survey-guided development are interviews conducted by the outside consultants with selected members of the organization. These interviews typically take the form of one interviewer together with one interviewee for approximately 30 minutes. Such



salience to members of the organization and providing specific examples of conditions and practices as they exist within the organization. Such data are often quite helpful in better understanding the questionnaire results and adding validity to these results for members of the system.

Constraints on interviewing include primarily the amount of time available for such activities. Typically, smaller percentages of the total organizational population are interviewed in larger organizations than in smaller organizations.

Although the data gathered through interviews seldom provide new and different information regarding the functioning of an organization, they do add some degree of description to what the questionnaire has already provided. Interview results may be thought of as the flesh which is added to the bone, sinews, and organs described by the survey data.

#### Training Internal Resource Persons

Soon after information has been collected by means of the questionnaires and interviews, a formal training program is conducted by the outside consultants for members of the organization who are to act as internal resource persons during the survey feedback activities. Criteria for selecting such persons include many factors such as their acceptability to others, their degree of upward mobility within the organization, a recognized expertise in a major functional area, and a recognized ability to interact with others in ways that are viewed as useful. The substance for such training has been documented in detail by Hausser, Pecorella, & Wissler (1975). Major content areas considered in this training include the background and rationale for survey-guided development, the uses of a

standardized instrument, methods of displaying and interpreting data from work groups, the necessary elements of meetings with group supervisors and work groups, the background for understanding and presenting data from the total organization, procedures for identifying problems throughout the organization, and a variety of possible activities of value in survey-guided development efforts.

Training typically occurs during a week long period wherein the trainees are removed from their normal work settings to devote full time to training activities. Techniques for this training include lecturettes, reading materials, practice in organizing and interpreting data, role playing practice for feedback meetings, and a variety of other activities that may be required of them in their roles as internal resource persons.

In addition to training in specific content areas, the internal resource persons are encouraged to explore difficulties they may encounter because of their unique roles within the organization. Of special concern are the requirements and constraints placed upon them by virtue of the required confidentiality of the data to which they have access. It is important that the internal resource persons recognize that their position is quite special and difficult. It is also important that they realize their mutual needs for reliance upon one another for support and assistance during the course of the organizational development efforts. Often these persons have not known each other prior to the initiation of the development activities. Ideally they become a close knit team within a short period of time.

Thus, the training received by the internal resource persons includes many facets. It is not only a training in knowledge, but also in skills, and in the adaptation to special and new roles which they must fulfill.

Although the initial training of the internal resource persons typically is completed within a week's time, they continuously upgrade their skills and knowledge once their participation in the actual activities begins. This occurs through interactions amongst themselves in which problems and issues are discussed, and from consultant feedback regarding various activities and behaviors. One mechanism for making feedback possible is for the internal resource persons to tape record all activities in which they take a major role. The consultants can then listen to the tapes and provide feedback from those tapes to the internal resource person. Such tapes also provide the internal resource persons with a mechanism by which they can keep detailed records of activities, especially meetings. (Such tapes also serve as extremely useful records for groups to keep in order to retrieve information from various activities. In this sense, the tapes also serve as a training device for group members themselves.)

### Concepts Training

As noted many times in the previous pages, a key element of survey-guided development is a model describing major facets of organizational functioning. "Concepts training" is a term used to describe activities which are provided to impart this model to members of the organization and to assist them in establishing goals. Concepts training typically involves the participation of members of the organization in approximately 20 hours of training activities. These primarily take the form of short

lecture inputs and experiential exercises designed to provide behavioral examples of the key concepts. Among the goals of concepts training is that organizational members gain an understanding of the key factors differentiating effective from ineffective organizations. It is especially important that these ideas are understood within the framework provided by the questionnaire instrument. In fact, one segment of concepts training includes practice in organizing and evaluating data similar to the questionnaire results they receive from their own work groups. Thus, the consequence of the concepts training is that organizational members are prepared to understand the questionnaire results not only in terms of the concepts being measured, but also the form that these data are fed back to them.

An important aspect of concepts training in survey-guided development which differentiates it from the type of training normally provided for managers is that the key concepts are described not only in terms of their individual characteristics, but also with reference to relationships they have to one another. Thus, for example, communications is described not as a unique element of organizational functioning, but rather as one piece of a whole picture including supervisory behaviors, decision-making practices, and a variety of other factors.

A major result of participation in concepts training is that when the data are returned to the supervisors and work groups, organization members are prepared to use the data. Thus, the internal resource people need not serve as sales persons to supply validity to the data, but rather may act as real resource persons to help individuals look at the data and gain a

better understanding of the meaning they hold. Further, since goals have been established during the concepts training sessions, the returned data can be used to evaluate changes required to reach desired objectives.

### Feedback to Supervisors

Once the data have been collected and organized, and once organizational members have been prepared to understand the background for the data and their organization, the data can be fed back to supervisors and group members. As a first step, data from each work group are summarized and provided to the group supervisor for perusal. Supervisors are encouraged to digest the data thoroughly. The resource person provides assistance to the supervisor in clearing up misconceptions or misunderstandings about the source and organization of the data.

If prior preparation for concepts training has been sufficient, little assistance in understanding the data is needed from the internal resource person. However, there is a second aspect of the feedback process in which the internal resource person must assist the supervisor. This is the preparation for meeting with subordinates to discuss the meaning of the data. Supervisors are often quite anxious prior to such meetings and the internal resource persons can provide assistance and assurance to the supervisor in preparing for the feedback meeting. Among other things, the supervisor is encouraged to lead the meeting but also to solicit as many comments from subordinates regarding the meaning of the data as possible. Thus, supervisors are trained in ways of posting information as it is brought out during the meetings and summarizing inputs from their subordinates.

### Group Feedback Meetings

After the supervisor has had an opportunity to digest data from the work group, a meeting is planned for work group members. In this meeting the supervisor retains his position as the head of the work group by conducting the meeting and guiding it. The internal resource person is present, however, as an expert in the data to answer questions about the data when they arise in the meeting, to maintain a motivating discrepancy, and to assist members in evaluating their own processes.

Occasionally questions arise during the course of feedback meetings and the internal resource person is called upon to clarify sources of data or ways that such data were brought together. There are also occasions when the resource person intervenes when that group is making assumptions not warranted by the data. For example, group members may suggest possible reasons why particular areas are high or low which are not supported by other data. It is in such instances that the resource person must point out unsupported assumptions or explanations and assist group members in their efforts to gain meaning from the data.

Often the supervisor or group members will attempt to avoid difficult or painful areas by denying their importance or negative impact. At this juncture the internal resource person must assist in establishing a motivating discrepancy for the group. This may be accomplished in a number of ways (e.g., focusing on differences between ideal and actual scores, comparisons with normative data, demonstrating relations between several weak areas) depending upon characteristics of the particular group and the situation.

The group's processes may be focused upon at any point during a session but, at least during the initial meeting, process evaluation usually are less threatening and most successful when they occur at the end of a session as a means of summarizing and evaluating the activity. In early meetings the resource person takes primary responsibility for structuring and guiding process discussions. Group members gradually take additional responsibility for process evaluations as they become more aware of these concerns and more familiar with process evaluations.

The time for such meetings varies but they typically encompass periods of from one to two hours. The time required to digest all of the data from the survey varies with the work group but typically the survey information can be digested within two or three such group meetings.

The meetings usually include several major stages. First is an understanding of the data themselves. This is a simple perusal of the numbers looking for areas indicating particular strength or weakness in the conditions or practices described. It is during this stage that group members should be reminded of the origin of the data, i.e., the questionnaires, and gain an understanding of how the data have been aggregated to reflect their own group's responses. The group may proceed through the data by item, by index, or by selective areas according to the decision of the supervisor in consultation with the internal resource person. Organizational climate serves as an area of preliminary focus for many groups because it tends to hold less threat than many other areas. However, whichever area is investigated, there are certain guidelines for evaluating the data. One clear objective of the feedback meetings is to determine what the data mean to the group members. Along this line group

members are queried as to the specific conditions or behaviors they had in mind when responding to the questionnaire or what other conditions or behaviors might be illustrative of the data.

Once the data have been translated from numbers to specific conditions and behaviors, the group members can identify problem areas suggested by low scores and strengths indicated by high scores. Since the focus of the feedback meetings is the identification and solution of problems, it is the problems to which most attention is given. A propensity for most groups is to look at problems caused for them or others by people outside of their own group. In order that such meetings do not become blaming sessions, group members are encouraged to construct two separate lists of problems. The first includes problems over which the particular group has no control. These problems are to be distributed from the supervisor to groups higher in the organization. The second list of problems are those which the group does control. These are the problems which serve as a basis for future activities of this group. Once these internal problems have been listed, problems solving activities begin.

#### Systemic Diagnosis

Subsequent to the initiation of group feedback meetings, the external consultants present a systemic diagnosis to key members of the organization. Such a diagnosis provides an overall view of the organization including strengths and weaknesses at various levels and in major functional areas. This feedback, often presented both in oral and written form, serves as a basis for planning the allocation of resources for major intervention activities.



Of special interest are problems which pervade major segments of the organization and hamper progress in problem solving efforts. Thus, as individual work groups are engaging in problem solving with a focus on their specific areas of involvement, there are also activities aimed at alleviating major blockages throughout the system. The planning for these major interventions relies upon an accurate identification of problem causes. Such an identification of specific problem causes is often a difficult task. The survey data do not always provide enough information to fulfill this need, but such data do suggest the areas or levels in which the problems originate. Once such areas have been identified, further diagnostic work may be undertaken to determine the specific problem cause. As described in previous chapters, unless such activities are done in a systematic way, resources may be wasted and interventions may prove futile.

#### Intermediate Interviews

As such change efforts develop, there is, of course, constant feedback of one type or another regarding the progress that is being made. However, it is important to formalize some of the feedback such that corrective activities can be systematically designed and implemented. For this purpose, interviews can be very useful. One form of this is to select representatives from various hierarchical levels and functional areas of the organization, much as was done in the original data collection activities, to reflect on progress encountered in the development activities. Based on such interviews steps can be taken to correct areas of weakness and encourage areas of strength in the development program.

### Assessment of Progress

A thorough evaluation of development progress must also occur. This takes the form of a readministration of the questionnaire from nine to 12 months after the first questionnaire data were gathered. Data from the second questionnaire administration are then compared with those data from the first to determine progress in the development effort. Because the data are gathered from all members of the organization and can be aggregated in various ways, evaluations can be made not only of overall changes but of changes in specified areas and from specific subunits of the organization. This is especially important since some studies have demonstrated clearly that progress in one area of an organization has been accompanied by worsening conditions in other areas. Since there is a strong propensity to exaggerate the successes and underplay the negative consequences, it is important to gather objective information which can be used to evaluate the overall impact of development activity throughout the system.

In addition to the assessment function, the second survey may be used as a basis for further feedback activities. Feedback at this time can provide indications to work group members of current strengths and weaknesses and areas demanding attention. As organizational members become accustomed to the uses of such data, they can continuously upgrade their functioning through periodic reevaluations of such data. In fact, some systems have incorporated the collection and feeding back of such data as a normal part of their operations.

### What Accumulated Evidence Suggests

The domain which the preceding chapters have described and the preceding pages summarized is characterized by an absence of evaluation in the formal literature of the field. Many efforts have been undertaken, yet little has been written. Fewer than a half-dozen major articles on the subject exist.

#### ISR Studies

Since approximately 1950, survey-based organizational development efforts have been undertaken by, or in some degree of association with, the University of Michigan's Institute for Social Research in 37 organizations (separate sites) within 22 major companies or large government agencies. By decade, approximately 15 per cent of these efforts occurred during the 1950's, 70 per cent during the 1960's, and (as of mid-decade) 15 per cent have occurred during the 1970's.

Nearly a third of these remain unreported anywhere in the literature, but are available in the memories of the organization's members and the documents contained in its files. Those which are reported have been treated usually in terms only partially congruent with the issues tagged as central to survey-guided development (Mann, 1965; Bowers, 1973).

In an effort to assess the fit of these many efforts to the principles outlined in these pages, a series of questions were posed (representing critical issues for survey-guided development) and answers retrieved from stored information concerning each past project. The questions, and their coded possible responses, are presented in Table 4.

Not all of these were considered to be equally critical for determining fit to what has here been described as a "Survey-Guided Development"

Table 4

## Questions Concerning Organizational Development Efforts

1. Was an adequate model of organizational functioning in place prior to the onset of any efforts?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

2. (If #1 is answered "No") Were any model-fixing methods employed?

\_\_\_\_\_ Yes, something akin to Concepts Training

\_\_\_\_\_ Yes, something akin to validation research

\_\_\_\_\_ No

3. Was there evidence that the questionnaire instrument was reliable, valid, and standardized?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

4. Was an adequate, formal diagnosis undertaken (i.e., was the systemic level considered)?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

5. Were there adequately trained resource persons available and involved?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

6. (If #4 is answered "Yes") Did they function as transducers or catalysts?

\_\_\_\_\_ Transducers

\_\_\_\_\_ Catalysts

Table continued on next page

Table 4 (continued)

7. Was what was undertaken truly feedback, or simply data handback?
- \_\_\_\_\_ Feedback  
\_\_\_\_\_ Handback
8. Were an array of possible treatment activities made available?
- \_\_\_\_\_ Yes  
\_\_\_\_\_ No
9. Were all hierarchical levels worked with, or only some?
- \_\_\_\_\_ All or Most  
\_\_\_\_\_ Some or a Few
10. Was there evidence of positive change?
- \_\_\_\_\_ Yes  
\_\_\_\_\_ No
11. (If #8 is answered "Yes") What changed?
- \_\_\_\_\_ Attitudes  
\_\_\_\_\_ Performance  
\_\_\_\_\_ Both attitudes and performance

paradigm. Two questions (#4 and #8) were considered less central than the others. Accordingly, fit to an SGD design was determined by the following configuration of answers:

"Yes" on 1 or 2

"Yes" on 3 and 5

"Transducer" on 6

"Feedback" on 7

"All or Most" on 9

The studies themselves were grouped according to four historical clusters:

Early Survey Research Center (SRC) Projects - five major efforts in large firms, ongoing between 1948 and 1960.

Late SRC - Early Center for Research on Utilization of Scientific Knowledge (CRUSK) Projects - three major efforts in large government agencies, ongoing during the early to mid-1960's.

Intercompany Longitudinal Study Projects (CRUSK) - 23 efforts in large firms, undertaken between 1966 and 1970, and broken here by survey feedback versus all other treatments, as described in the literature (Bowers, 1973).

Organizational Development Research Program Projects (CRUSK) - 6 efforts in large firms, undertaken since 1970 by successors to the ICLS effort.

The results of this assessment are presented in Table 5. A somewhat different, condensed representation, which shows (a) percentage fitting an SGD paradigm (i.e., at least 4 of the 6 criteria are met), (b) percentage of those judged as "fitting" it which also presented evidence of positive change, and (c) percentage of those judged as not "fitting" it which presented evidence of positive change, appears as Table 6.

An interesting observation is the substantial increase in the rate or numbers of such efforts during the tumultuous decade of the 1960's, an increase which was, by and large, unprofitable. Although these data are drawn solely from experience by one institution, it seems plausible to believe that the pattern would be found to hold for others as well.

From the decade of the 1950's to that of the 1960's (represented in these data by the comparison of Early SRC with Late SRC - Early CRUSK studies) the principal changes were in change agent style (from transducer to catalyst), in kind of activity (from feedback to handback, as far as the data were concerned), and coverage (from all or most, to some or few). This probably reflects the practice of intense personal consultation with top management groups which was much in vogue during the 1960's and which predominated well into the ICLS period. For the Survey Feedback subset of ICLS sites (not separated out in Table 6); it was primarily coverage which was different (in these sites change agents tended to cover all or most groups), in combination with feedback (not handback), using a standardized instrument. Change agent style remained largely catalytic, however.

Moving from the 1960's to the 1970's, the changes have occurred largely in the areas of model-fixing (the use of Concepts Training),

Table 5

## Percentage of Sites, by Clustering

	Early SRC	Late SRC Early CRUSK	ICLS	ODRP
Q.1 Adequate model in place at outset?				
Yes	0	0	4	0
No	100	100	96	100
Q.2 Model-fixing methods employed?				
Yes, Concepts Training	20	0	0	83
Yes, validation research	40	100	74	0
No	40	0	16	17
Q.3 Standardized questionnaire?				
Yes	0	0	100	100
No	100	100	0	0
Q.4 Systemic diagnosis?				
Yes	0	0	28	100
No	100	100	72	0
Q.5 Trained resource persons?				
Yes	100	100	100	50
No	0	0	0	50
Q.6 Transducers or Catalysts?				
Transducers	60	0	4	50
Catalysts	40	100	96	0
Inap.	0	0	0	50
Q.7 Feedback or Handback?				
Feedback	40	100	26	67
Handback	60	0	74	33

Table continued on next page



Table 5 (continued)

	Early SRC	Late SRC Early CRUSK	ICLS	ODRP
Q.8 Array of Treatments?				
Yes	0	0	0	0
No	100	100	100	100
Q.9 All levels worked with?				
All or Most	40	33	39	67
Some or a Few	60	67	61	33
Q.10 Evidence of Positive Change?				
Yes	60	33	36	67
No	40	67	64	33
Q.11 What changed?				
Attitudes only	20	33	18	17
Performance only	0	0	0	0
Both	40	0	18	50

Table 6  
Fit to Survey-Guided Development:  
Paradigm and Project Success

Category of Projects	Percentage Fitting SGD Paradigm	Percentage of Fit Showing Positive Change	Percentage of Non-Fit Showing Positive Change
Early SRC	40	100	33
Late SRC- Early CRUCK	33	100	0
ICLS	22	100	11
ODRP	67	100	0

change agent style (more clearly Transducer), and the use of formal, systemic diagnosis. This is reflected in Table 6 in the fact that the highest percentage "fitting" a survey-guided development paradigm occurs in this most recent period.

### Other Studies

Sifting the literature for other bits of relevant evidence concerning survey-guided development is at one and the same times a simple, yet a difficult, task. It is simple because few really adequate studies exist. It is difficult because any effort in which survey data were obtained and reported to someone in a client system might be considered as potential candidates.

Applying what are admittedly rather subjective criteria to what appears reduces the array considerably, however. In fact, only four appear in the generally available literature which meet even the following minimal criteria:

- they were developmental in purpose;
- they were concerned specifically with enhanced organizational functioning;
- they employed data collected by means of a questionnaire or interview survey as a principal developmental tool

Of the four, that by Coughlan, et al. (1972) seems most complete and most on target for our present purposes. Working in 24 elementary schools, these investigators compared what they termed an "SF-PS-CD" intervention strategy (survey feedback+problem solving+collective decision) with what they termed "survey feedback alone" and control conditions. As described, their SF-PS-CD treatment appears to bear a close resemblance to what we have termed survey-guided development. By the scoring system employed in assessing the fit of ISR studies to an SGD paradigm, it attains four out of six possible points and thus is classified as "fitting" that design at least as

well as many of the cited ISR studies. What they termed "survey feedback alone" appears to resemble what we have termed "data handback."

The results are encouraging, furthermore. In general, conditions improved in the experimentals, not in the controls. School outputs, evaluated by interview and by documentation, showed that the intervention enhanced school effectiveness. Attitudes and perceptions changed quite positively, with marked improvements in communication, morale, and problem-solving effectiveness.

Miles, et al. (1969) also report the results of a survey feedback effort in a school system. In this instance, the study design differed somewhat from what is here termed an SGD paradigm. No evidence is available concerning whether an adequate model was in place prior to the consultants' arrival, and no mention is made of specific efforts to gain advance acceptance of such a model. Although the questionnaire instrument had been designed for use in another system, it could not be considered to have been "standardized." Resource persons, with an emphasis upon process analysis, were clearly catalytic in style. However, it is clear that the treatment was survey feedback, not merely handback, and that it occurred for all or most groups, not just for some or a few. The results were rather disappointing: little other than chance fluctuation appears to have occurred.

In the two industrial studies, the written account which appears in the literature (a) focuses upon change processes, rather than outcomes or connections between the two, and (b) provides too little information for us to judge the degree to which either study matches in its design an SGD paradigm. For example, Klein, et al. (1971) report findings from a study of survey feedback in six manufacturing plants. Once more, no

evidence is presented concerning advance acceptance by participants of a model to which subsequent feedback was congruent. In this instance, it appears to be likely that a standardized questionnaire instrument was used, but no systemic diagnosis appears to have been undertaken, and trained resource persons seem seldom to have been involved. (However, the supervisors' own skill as change agents does appear to have been a factor.) Although the process varied from location to location, real feedback, not merely data handback, does appear to have occurred in at least some locations, and all or most groups received at least some exposure to the data. In the study as reported, satisfaction with the feedback procedure itself, and perceived utilization of survey results, not changed organizational functioning, were the criteria employed. The findings are therefore an important addition to the research literature on the processes of feedback, but they present little information on the connection between those change processes and organizational consequences.

A somewhat similar situation exists with regard to the study by Alderfer (1972), who correctly points out that, of five citable articles, only two are concerned with feedback outcomes, whereas the remainder are concerned largely with feedback processes. His own article proceeds in this same direction, looking at such issues as perceived competence of change agents in relation to satisfaction with the feedback process. In this, as in the other articles of its kind (Neff, 1965; Chesler & Flanders, 1967), findings concerning process are difficult to interpret in the absence of findings concerning outcomes.

One cannot help but acknowledge that the evidence concerning survey-guided development is demonstrably sketchy. Much of it has been garnered in studies at the Institute for Social Research, and our cataloging of

evidence from these studies, published and unpublished, while it helps to fill a previous void, is to some degree challengeable on grounds of potential bias. Still, there is sufficient evidence to suggest that outcomes and their contributive processes coincide with the principal postulates of a survey-guided development framework. In addition, the fact that the success rate in recent efforts appears to have shown marked improvement is cause for encouragement.

### Challenges for the Future

In this volume we have described theories and procedures representing an integration of developments which draw upon research and experiences of individuals studying many organizations for several years. Advances in four definable areas have contributed substantially to the current state of the art in organizational development as represented by the survey-guided development approach. These include developments in (1) organizational theories which have reached levels of sophistication enabling descriptions of processes which account for significant variations in performance differences among organizations, (2) the abilities to accurately measure major processes described by organizational theories in relatively inexpensive and otherwise efficient ways--i.e., using standardized questionnaire instruments based on such theories, (3) computer technology providing the means for quickly and efficiently storing, organizing, and retrieving information, and (4) processes and techniques affecting change in organizations. Although there is still uncertainty, and further developments are needed in each of these areas, the accumulated evidence indicates that the goals associated with organizational development efforts are attainable through a careful application of the principles, techniques, and procedures described herein.

Yet, there remains room for significant advances beyond what is currently considered the limits of organizational development. These needs for improvement are suggested by documented reports of shortcomings in development efforts and the accumulated experiences and observations of the present authors and their colleagues. They are offered not so much as shortcomings, but more as areas presenting challenges for the future. The following list is certainly incomplete. However, it does represent areas where, in our judgment, advances hold high potential for improving the field of organizational development.

- A more complete model of organizational functioning describing factors which influence the transmission of inputs to outputs.

Notably lacking are detailed descriptions of relationships among throughput processes and relationships between a variety of throughputs and possible output measures.

- Improved diagnostic procedures to increase (a) the speed and accessibility of diagnostic information, (b) the comprehensiveness and quality of diagnoses, and (c) the efficiency (i.e., reduce the cost) of producing useful diagnoses.

Although much of the information needed to produce high quality and useful diagnostic reports now exists, they tend to be limited in their comprehensiveness and quality by the inabilities of individuals to efficiently organize and assimilate large masses of complex data. Further, the examination and evaluations of such quantities of data tends to be a slow, tedious, and thus, costly process. An apparent solution to the problems caused by these limitations appears to be in

the area of automation. That is, the information base suggests the possibility of using computer capabilities to process the data and actually produce diagnostic reports.

- More information concerning procedures and activities that result in improved organizational functioning and under what conditions or in which situations different activities are most beneficial. There exists very little evidence suggesting the absolute or comparative values of different treatments in a variety of possible organizational situations. The appropriate matching of treatments with problem causes is made extremely difficult and risky by this lack of information. Ideally, what is desired would be an indication of the probability of successful outcomes associated with such of a multitude of treatments for a variety of possible situations.
- The availability of interventions or treatments in a form that is economical and can be integrated into the framework of an overall effort of organizational development in an organization. Although many treatments are now available, they tend to be offered as self-contained entities unto themselves. The use of two or more such treatments is likely to result in confusion of purpose, excessive expenditures of resources, and a variety of other dysfunctional consequences for the organization and its members. Needed are treatments packaged such that they are economical, generally available, and easily adapted to a variety of situational needs.



- The training of consultants, resource persons, or change agents in multiple skills and the ability to select and apply treatments in accordance with organizational needs. The O.D. specialist with a single treatment which is applied in all situations no longer takes advantage of the available knowledge and technology in organizational development. Yet, the availability of individuals with multiple skills and the knowledge and skills necessary to selectively apply treatments remains quite limited.
- More emphasis on training both O.D. specialists and organizational members in psychomotor skills. Knowledge has too often been equated with the ability to perform even when experience clearly indicates the lack of automatic association between them.
- New and better ways of training. A gap exists between the knowledge and skills required for more effective organizational functioning and for bringing about organizational change, and the techniques used to impart such knowledge and skills. There remains a primary reliance on inefficient and ineffective training techniques (e.g., lectures, standard written materials, etc.), and a notable underutilization of the more efficient and effective procedures such as audio and video tapes and interactive systems including computer assisted instruction.
- Improved intermediate feedback during the course of organizational development projects. Typically, the focus is on the implementation of treatments rather than evaluations of their impact.
- Better measures and methods (possibly unobtrusive) to monitor ongoing progress and to reduce the period between ineffective activities and the initiation of corrective measures.

- Better methods and more opportunities to study change agency.

Little is known about factors which differentiate between effective and ineffective change agent behaviors, thus, a situation in which everyone does "his own thing" prevails. The likelihood of maximizing benefits to the organization within such a situation are doubtful.

- Improved procedures for evaluating the outcomes or payoffs from organizational development projects. Most current efforts in this area tend to be self-serving mechanisms for proving the value of what has been done. As such, they are limited in scope and less than objective in nature. This concern is especially critical in light of research demonstrating that positive outcomes in one part of an organization or facet of functioning are often accompanied by negative consequences in other parts or facets of the same organization. Thus, it appears that in some cases at least selective evaluation enables one to produce what is desired.

## References

- Alderfer, C. Organizational diagnosis from initial client reactions to a researcher. Human Organization, 1968, 27, 260-265.
- Alderfer, C. & Ferriss, R. Understanding the Impact of Survey Feedback. In W. W. Burke & H. A. Hornstein (eds.), The Social Technology of Organization Development. Fairfax, Virginia: NTL Learning Resources Corp., 1972, 234-243.
- Anderson, S.B.; Ball, S.; Murphy, R.T. and Associates. Encyclopedia of Educational Evaluation. Jossey-Bass Publishers, 1975.
- Argyris, C. Interpersonal competence and organizational effectiveness. Homewood, Ill.: Irwin, 1962.
- Baker, F. & Schulberg, H.C. A systems model for evaluating the changing mental hospital. In F. Baker (ed.), Organizational Systems. Homewood, Ill.: Richard D. Irwin, Inc., 1973, 476-488.
- Bandura, A. Social learning theory of identificatory processes. In D. A. Goslin (ed.), Handbook of socialization theory and research. Chicago: Rand-McNally, 1968.
- Bennis, W. Theory and method in applying behavioral science to planned organization change. Journal Applied Behavior Science. 1965, 1, 337-360.
- Blake, R.R. & Mouton, J.S. The Managerial Grid. Houston: Gulf Publishing Co., 1964.
- Blalock, H.M, Jr. & Blalock, A.B. Toward a clarification of system analysis in the social sciences. Philosophy of Sciences, 1959, 26, 84-92.
- Bowers, D.G. The scientific data based approach to organization development, Part 2. In Hite, A.L. (ed.), Organizational development: The state of the art. Ann Arbor, Mich.: Foundation for Research on Human Behavior, 1971.
- Bowers, D.G. OD Techniques and their results in 23 organizations. Journal of Applied Behavioral Science, 1973, 9 (1), 21-43.
- Bowers, D.G. Navy Manpower: values, practices, and human resources requirements. Ann Arbor, Mich.: Institute for Social Research, 1975.
- Bowers, D.G. & Hausser, D.L. Group types and intervention effects in organizational development. Ann Arbor, Mich.: Institute for Social Research, 1974.

- Bowers, D.G. & Norman, R. Strategies for changing an organization. Innovation, 1969, 5, 50-55.
- Bowers, D.G. & Seashore, S.E. Predicting organizational effectiveness with a four-factor theory of leadership. Administrative Science Quarterly, 1966, 11, 238-293.
- Butterfield, D.A. An integrative approach to the study of leadership effectiveness in organizations. Unpublished doctoral dissertation. Ann Arbor, Mich.: University of Michigan, 1968.
- Cartwright, D. & Zander, A. Group Dynamics. Row, Peterson & Co., 1960.
- Chesler, M. & Flanders, M. Resistance to research and research utilization: The death and life of a feedback attempt. Journal of Applied Behavioral Science, 1967, 3, 469-487.
- Fiedler, F.E. A theory of leadership effectiveness. New York: McGraw-Hill, 1967.
- Flanders, J.P. A review of research on imitative behavior. Psychological Bulletin, 1968, 69, 316-337.
- Franklin, J.L. A path analytic approach to describing causal relationships among social-psychological factors in multi-level organizations. Doctoral dissertation, University of Michigan, 1973.
- Franklin, J.L. Down the organization: Influence processes across levels of hierarchy. Administrative Science Quarterly, 1975a, 20, 153-164.
- Franklin, J.L. Relationships among four social-psychological aspects of organizations. Administrative Science Quarterly, 1975b, 20, in press.
- Friedlander, F. A comparative study of consulting processes and group development. Journal Applied Behavioral Science. 1968, 4, 377-399.
- Hagen, E.E. Analytical models in the study of social systems. American Journal of Sociology, 1961-1962, 67, 144-51.
- Hausser, D.L.; Pecorella, P.A. & Wissler, A.L. Survey-guided development: A manual for consultants. Ann Arbor, Mich.: Institute for Social Research, 1975.
- Havelock, R.G. The change agent's guide to innovation in education. Ann Arbor, Mich.: Institute for Social Research, 1973.
- Katz, D. & Kahn, R.L. The social psychology of organizations. New York: Wiley & Sons, Inc., 1966.
- Kelley, C.R. Manual and automatic control. New York: Wiley, 1968.

- Klein, D. Some notes on the dynamics of the resistance to change. In W.G. Bennis et al. (eds.), The Planning of Change. New York: Holt, Rinehart & Winston, Inc., 1969, 498-507.
- Lawrence, P.R. & Lorsch, J.W. Developing organizations: Diagnosis and action. Reading, Mass.: Addison-Wesley, 1969.
- Leavitt, H.J. Applied organizational change in industry. In J.G. March (ed.) Handbook of organizations. Chicago: Rand-McNally, 1965, 1144-1170.
- Levinson, H. The clinical psychologist as organizational diagnostician. Prof. Psychol, 1972, 3, 34-40.
- Likert, R. New patterns of management. New York: McGraw-Hill, 1961.
- Likert, R. The human organization. New York: McGraw-Hill, 1967.
- Likert, R. & Bowers, D.G. Organizational theory and human resource accounting. American Psychologist, 1969, 24, 585-592.
- Likert, R. & Bowers, D.G. Improving the accuracy of P/L reports by estimating the change in dollar value of the human organization. Michigan Business Review, 1973, 25 (2), 15-24.
- Likert, R. & Seashore, S.E. Making cost control work. Harvard Business Review, 1963, 41 (6), 96-108.
- Lippitt, R.; Watson, J. & Westley, B. The dynamics of planned change. New York: Harcourt, Brace and World, 1958.
- Mann, F.C. Studying and creating change: A means to understand social organizations. In C.M. Arsensberg, et al. (eds.) Research in Industrial Human Relations. New York: Harper, 1957, 157-167.
- Mann, F.C. Studying and creating change. In W.G. Bennis, et al. (eds.) The Planning of Change. New York: Holt, Rinehart & Winston, Inc., 1961, 605-615.
- Mann, F.C. Toward an understanding of the leadership role in formal organizations. In R. Dubin, et al. (eds.) Leadership and Productivity. San Francisco: Chandler, 1965, 68-103.
- Miles, M.B. et al. The consequences of survey feedback: theory and evaluation. In W.G. Bennis et al. (eds.) The Planning of Change. New York: Holt, Rinehart & Winston, Inc., 1969, 457-468.
- Miller, N.E. & Dollard, J. Social learning and imitation. New Haven, Conn.: Yale University Press, 1941.

- Mowrer, O.H. Learning theory and the symbolic processes. New York: Wiley, 1960.
- Neff, F.W. Survey Research: A tool for problem diagnosis and improvement in organizations. In A.W. Gouldner & S.M. Miller (eds.), Applied Sociology. New York: Free Press, 1965, 23-38.
- Peak, H. Attitude and motivation. In M.R. Jones (ed.), Nebraska Symposium on Motivation. Lincoln, Neb.: University of Nebraska Press, 1955, 172-173.
- Pennington, L.A. & Berg, I.A. An introduction to clinical psychology. New York: The Ronald Press Co., 1954.
- Survey Research Center. A program of research on the fundamental problems of organizing human behavior. Ann Arbor, Mich.: Institute for Social Research, 1947.
- Taylor, J.C. An empirical examination of a four-factor theory of leadership using smallest space analysis. Organizational Behavior and Human Performance. 1971, 6, 249-266.
- Taylor, J.C. Technology and planned organizational change. Ann Arbor, Mich.: Institute for Social Research, 1971b.
- Taylor, J.C. & Bowers, D.G. Survey of organizations: a machine-scored standardized questionnaire instrument. Ann Arbor, Mich.: Institute for Social Research, 1972.
- Tichy, N.M. Agents of planned social change, congruence of values, cognitions, and actions. Administrative Science Quarterly. 1974, 19, 164-182.
- Yuchtman, E. & Seashore, S.E. A system resource approach to organizational effectiveness. American Sociological Review, 1967, 32, 891-903.